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ABSTRACT

This annual report provides an overview of the status of vocational education during school year 1980-81. It includes final data for school year 1979-80 obtained through the Vocational Education Data System (VEDS), the national vocational education reporting and accounting system. Part 1 of the report describes the status of vocational education during 1979-80 in terms of the requirements of the Vocational Education Amendments of 1976, namely appropriations, expenditures, students, vocational student organizations, teachers, facility and equipment, program improvement, state and local administration, occupational information, and compliance and quality reviews. Data are from the National Center for Education Statistics, United States Department of Education. Part 2 of the report focuses on vocational education's responsiveness to and impact on national needs for economic revitalization, defense preparedness, high technology, inner-city and rural initiatives, agriculture, domestic energy and mineral production, and entrepreneurship. Each national need is first discussed, and then vocational education's response, including programs, training, services, and (research) studies, is described. Appendixes, constituting about half of the document, include 17 tables regarding funding and 11 tables dealing with enrollment for 1979-80. (YLB)

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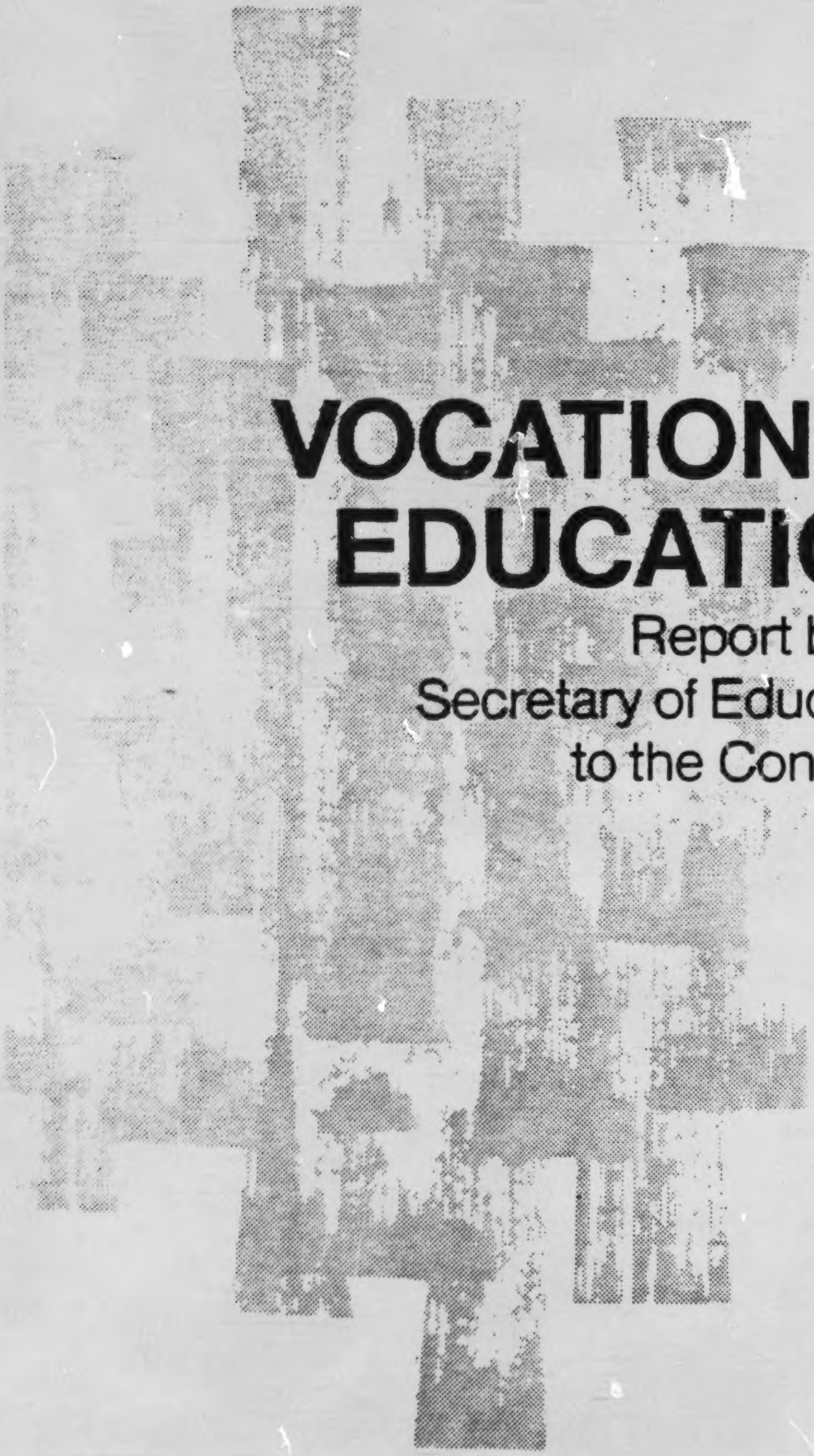

VOCATIONAL EDUCATION

Report by the Secretary of Education to the Congress

1981

CE 033 180

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FOREWORD

This annual report on the status of vocational education during school year 1980-81 is mandated by the Vocational Education Act of 1963, as amended (Title II, Public Law 94-482). The report includes final data for school year 1979-80 obtained through the Vocational Education Data System (VEDS), which is the national vocational education reporting and accounting system also mandated by the Act. Fiscal year 1980 is the States' fiscal year which began July 1, 1979 and ended June 30, 1980. This is also referred to as school year 1979-80. Throughout this report we will use terms such as 1978-79 and 1979-80 to mean the States' school year from July 1 of one year to June 30 of the next. Data sources other than VEDS refer to fiscal year 1981.

The focus of this report is to provide an overview of the progress and status of vocational programs conducted in the field during school year 1980-81, rather than the issue of the Federal role in vocational education. Although the current legislation has caused some problems in the State management of vocational education, program service to clients and the operation of local programs are largely successful in spite of the legislation. Current Federal deregulation efforts and development of new legislation to consolidate existing vocational and adult education are an Administrative priority to reduce the Federal role and allow States and localities to assume greater control of their programs.

Part I of this report describes the status of vocational education during 1979-80 in terms of appropriations, expenditures, students, vocational student organizations, teachers, facilities and equipment, program improvement, State and local administration, occupational information, and compliance and quality reviews.

Part II focuses on vocational education's responsiveness to and impact on national needs for economic revitalization, defense preparedness, high technology, inner-city and rural initiatives, agriculture, domestic energy and mineral production, and entrepreneurship.

Data contained in Part I were contributed by the National Center for Education Statistics, U.S. Department of Education. The ready assistance provided by the NCES staff is greatly appreciated.

Response examples featured in Part II were abstracted or adapted from a variety of sources including the National Center for Research in Vocational Education at the Ohio State University, the American Vocational Association, and the Illinois State Board of Education. Additional information was provided by State staff, particularly in Michigan, Massachusetts, and Maryland. Finally, background information in specific areas was forthcoming from the U.S. Department of Defense, the U.S. Department of Labor, and the House Armed Services Committee of the United States Congress. All of these contributions are gratefully acknowledged.

This report was prepared by the Policy Analysis and Legislation Staff of the Office of Vocational and Adult Education (OVAE), U.S. Department of Education, in cooperation with other OVAE units, and was reviewed by all major units within the Department.

Robert M. Worthington, Ph.D.
Assistant Secretary for
Vocational and Adult Education

June 1982

SUMMARY

In school year 1979-80, as in previous years, vocational education helped to prepare persons of all ages in all communities for work. Although total enrollments in 1979-80 decreased by approximately 375,000 to a new total of 16.5 million students, the enrollment of females, handicapped, and disadvantaged increased. Vocational education also continued to serve other special population groups such as displaced homemakers, Indians, the incarcerated, those with limited English proficiency, and students from the Appalachian Region.

Federal and State and local expenditures for vocational education in 1979-80 reached an all-time high of $6.8 billion. This was an absolute increase of $320 million from the previous year. Because of the effects of inflation in that year, however, total support actually decreased.

During school year 1980-81, vocational education sharpened its focus to more adequately address national needs while still serving the special populations as required by the Vocational Education Act. Two of the most important national problems identified in 1980-81 were economic revitalization and improving defense preparedness. Vocational educators realized that skilled workforce development would be essential to help address these and other national needs.

State vocational education systems have already offered programs that respond to national needs. Examples of programs that have addressed economic revitalization include retraining unemployed steel workers in air conditioning, refrigeration and heating, and small engine repair; retraining unemployed elementary school teachers as computer programmers and analysts; creating apprenticeship training programs with local businesses to reduce skilled worker shortages; and developing customized "quick-start" training programs for business and industry new to an area. Programs that have addressed defense preparedness include vocational instructors working full time at a shipbuilder's site to train company employees; special programs to train computer and electronics technicians for the Lockheed Missiles and Space Company; and a $13 million contract between the United States Navy and four postsecondary technical institutions to train active-duty naval air technicians.

Vocational education continues to provide a consistent flow of skilled, entry-level workers from its regular secondary and postsecondary programs, while meeting the needs of special population groups. In addition, vocational education has provided flexible, innovative programs that address the skilled workforce development that is needed to help solve our Nation's problems.

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I STATUS OF VOCATIONAL EDUCATION IN 1981

Vocational education, through its many programs, services and activities, has the primary mission of preparing persons of all ages in all States for work, while also emphasizing equal educational opportunities for males and females, the disadvantaged, the handicapped, students with limited English-proficiency, Indians, and the incarcerated. Vocational education also retrains and upgrades adult workers to help them keep abreast of the changing needs of business and industry. These programs are designed to provide incentives that encourage workers to acquire new, higher-level skills which will enable them to work in occupational areas where the greatest expansion is expected in the future. These efforts help to reduce the number of workers who are displaced, unemployed or underemployed because their skills are no longer in demand. In addition to meeting the educational needs of individuals, vocational education makes significant contributions toward achieving national goals of improved productivity and economic development.

The following information describes the status of the vocational education enterprise in terms of the requirements of the Vocational Education Amendments of 1976.

APPROPRIATIONS

The fiscal year 1979 Federal appropriations for vocational education were available to the States for expenditure during the States' fiscal year 1980, which began July 1, 1979. The following table lists the total Federal appropriations. Funds listed for bilingual vocational training and programs of national significance, however, are Federal discretionary funds which are dispersed through competitive contracts and grants. State advisory councils' funds are dispersed directly to the councils and not through the State Boards of Vocational Education. This reduces the amount made available directly to these Boards.

TABLE 1 Federal appropriations for vocational education, fiscal year 1979

Basic grants (Section 120)	$474,766,000
Program improvement (Section 130)	112,317,000
Programs of national significance (Section 171)	10,000,000
Special programs for the disadvantaged (Section 140)	20,000,000
Consumer and homemaking education (Section 150)	43,497,000
State advisory councils (Section 105)	6,073,000
Bilingual vocational training (Section 183)	2,800,000
State planning (Section 102(d))	5,000,000
Smith-Hughes permanent appropriation	7,161,455
Total	$681,614,455
Total net disbursements to State Boards	$662,741,455

This was an overall increase of almost $40 million from the previous year. Federal funds appropriated for use in fiscal year 1981 (the results of which will be reported next year) amounted to over $784 million, an increase of $103 million from the 1980 figures listed above.

EXPENDITURES

State expenditures of Federal Vocational Education Act funds almost always vary from amounts appropriated for any given year by the Congress. This occurs because States have a 27-month period in which to spend any single year's appropriation. In 1979-80 over $640 million were expended, including carryover funds from previous years and planning funds available under Section 102(d). This figure does not include unliquidated obligations. This was an increase of $75 million from 1978-79 expenditures. State and local expenditures for vocational education were almost $6.2 billion in 1979-80, an increase from $5.9 billion in 1978-79. The ratio of State and local expenditures to Federal expenditures is 9.6:1. Chart A (p. 5) shows the overall increase in expenditures for vocational education since 1972. Table 2 (p. 6) provides details on expenditures for 1979-80.

PROGRAMS AND STUDENTS

In school year 1979-80, 16,453,006 students were served nationwide in vocational education (50 States and the District of Columbia only), including 10.1 million secondary and 6.4 million postsecondary and adult students. These numbers show a slight decrease from school year 1978-79 when a total of 17,033,620 students were served under this program (total United States and Outlying Areas). Most of this decrease is attributable to the fact that total secondary school enrollment is decreasing. In addition, the 1979-80 figures do not include any enrollments for the Outlying Areas which reported 206,000 enrollments in 1978-79. The Outlying Areas include American Samoa, Guam, Northern Marianas, Puerto Rico, the Trust Territory, and the Virgin Islands.

Occupationally Specific Programs

The 1976 Amendments gave major emphasis to areas such as increasing service to target populations and working toward sex equity in all programs. While considerable attention was given to the need for accurate occupational demand data in planning basic programs of vocational instruction, little mention was made of these programs, themselves. These basic programs must, and do, provide the vehicle for accomplishing the Act's special-interest thrusts. Since the main purpose of vocational education is to provide occupationally specific instruction, the majority of students are enrolled in these programs.

During the 1979-80 school year, enrollment was 10,341,000 in the following occupational program areas: agriculture; business and office; marketing and distribution; health occupations; vocational home economics; trade and industrial; and technical education. Since the major focus of this part of the report reflects the Act's concern with target populations, it is appropriate at least to define the basic vocational programs that serve these populations. It should also be noted that the responses to national needs described in Part II have been accomplished almost exclusively through the occupationally specific programs that are briefly defined below.

Expenditures For Vocational Education (VEA) By Source of Funds

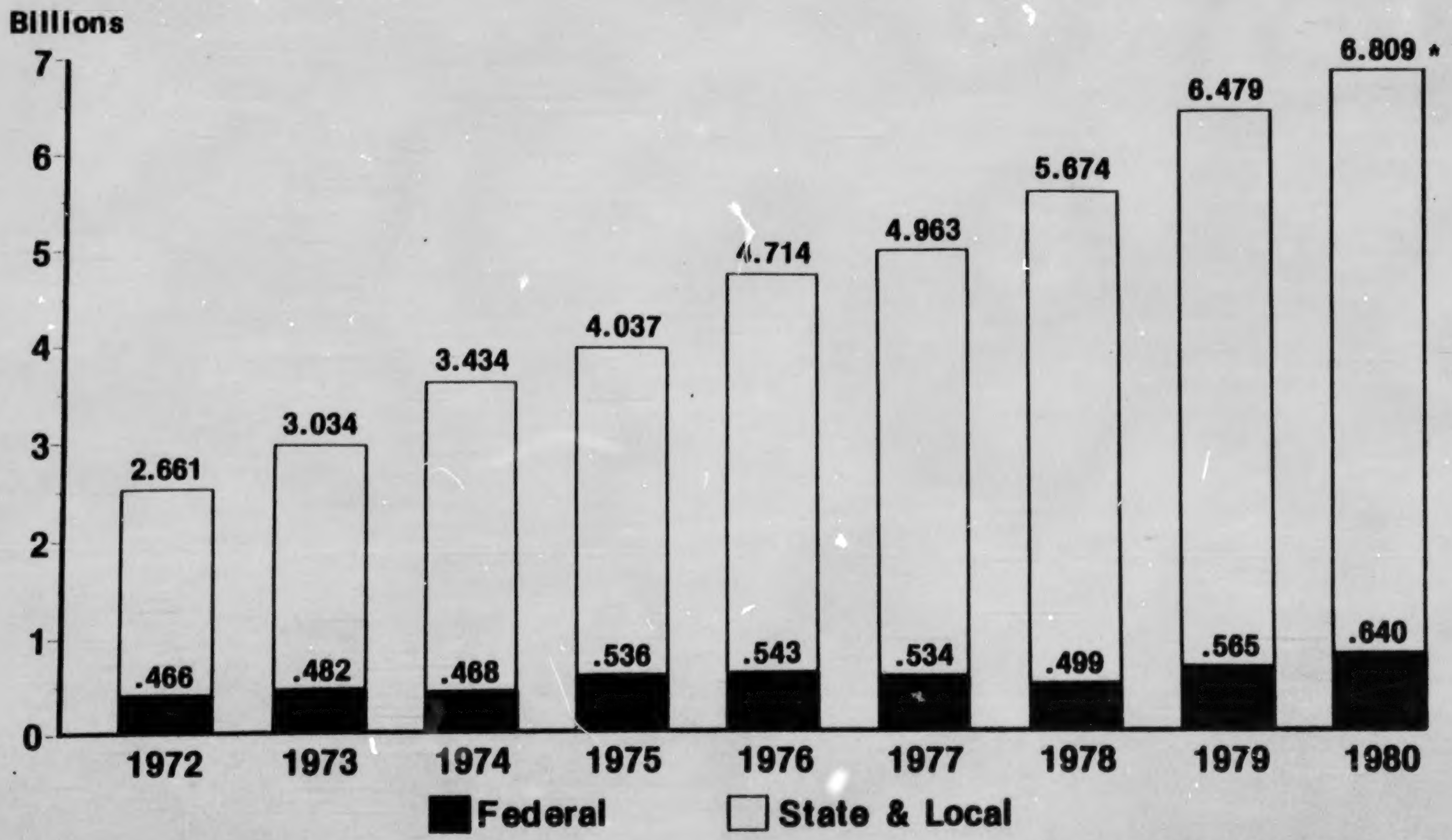


Chart A

Source: NCES/VEDS FY-'80

* Total of Federal, State and Local Expenditures

Table 2 Federal and State/local vocational education expenditures (including carryover funds) by Sections of the Act for school year 1979-80, United States and Outlying Areas

	Federal	State/local	Total
Section 110, National Priority Programs (Excess costs only, except for post./adult)*			
Handicapped	63,063,123	132,194,946	195,258,069
Disadvantaged	109,747,915	364,681,862	474,429,777
Limited English Prof.	5,163,792	20,333,491	25,497,283
Postsecondary/adult	138,122,602	2,630,974,935	2,769,097,537
Section 120, Basic Grant			
Vocational programs	374,695,204	4,595,271,336	4,969,966,540
Work-study	7,226,501	16,015,821	23,242,322
Cooperative	10,885,092	119,198,814	130,083,906
Energy	940,451	3,831,352	4,771,803
Construction	13,789,001	122,578,130	136,367,131
Full-time personnel	2,948,852	1,164,267	4,113,119
Stipends	587,319	24,488	611,807
Placement services	484,798	3,286,173	3,770,971
Industrial arts	5,412,002	167,102,245	172,514,247
Support services	1,093,466	1,279,424	2,372,890
Day care	797,294	764,295	1,561,589
Displaced homemakers	3,136,065	6,943,444	10,079,509
Residential schools	770,023	3,794,384	4,564,407
Contracted instruction	460,047	3,300,714	3,760,761
State administration	34,076,457	50,534,666	84,611,123
Local administration	7,327,929	300,397,987	307,725,916
Section 130, Program Improvement and Supportive Services			
Research coordinating units	30,367,759	18,493,548	48,861,307
Guidance & counseling	40,657,601	213,357,153	254,032,754
Preservice/inservice	23,201,583	25,028,452	48,230,035
Grants to overcome sex bias	2,167,385	1,836,149	4,003,227
State administration	9,291,555	10,985,874	20,277,429
Local administration	1,637,385	33,458,074	35,095,459
Section 140, Special Disadvantaged			
Special disadvantaged	21,852,597	12,708,608	34,561,205
Section 150, Consumer and Homemaking			
Non-depressed/programs	12,394,187	237,067,440	249,461,627
Ancillary services	4,369,210	5,540,491	9,909,701
Depressed/programs	24,162,826	208,763,901	232,926,727
Ancillary services	2,895,977	5,880,819	8,776,796
Section 102(d), State Planning			
State planning	2,596,152	397,627	2,993,779
GRAND TOTAL	$640,242,411	$6,169,005,676	$6,809,248,087

*Funds in Section 110 are duplicate counts of funds listed in Sections 120 and 130 and are not added in the Grand Total figures.

Of the students enrolled in these occupationally specific programs, a total of 1,857,934 completed the program and were available for employment. This figure does not include those who obtained sufficient skills and left the program before completion. Further information on the numbers of completers by program and institution are listed in Appendix 2, Tables E-8 to E-11. Followup on program completers from school year 1978-79 are not yet available from the National Center for Education Statistics.

Agriculture

Agriculture is comprised of groups of instructional programs that prepare individuals to apply scientific knowledge and methods and technical skills in support of agribusiness and agricultural activities concerned with the production and propagation of crops, animals, supplies and services, mechanics, products processing and marketing, and horticulture. This comprehensive program also prepares individuals for activities involving the conservation and/or improvement of natural resources such as: air, soil, water, land, fish, and wildlife for economic and recreational purposes.

Business and Office

This is a group of instructional programs that prepares individuals for a variety of activities in planning, organizing, directing, and controlling all business office systems and procedures. It includes instruction in preparing, transcribing, systematizing, and preserving written communications and records; preparing and analyzing financial records; collecting accounts and receiving and disbursing money; gathering, processing, and distributing information and mail; operating office machines, computers and electronic data processing equipment; storing, distributing, and accounting for inventories of materials; and operating telephone switchboards and delivering messages.

Marketing and Distribution

These are groups of instructional programs that prepare individuals for occupations associated with the flow of industrial and consumer goods in channels of trade, or the provision of services to consumers or users. These programs are concerned with marketing, sales, distribution, merchandising, and management, including ownership and management of enterprises engaged in marketing. The programs prepare individuals to perform one or more of the marketing functions, such as selling, buying, pricing, promoting, financing, transporting, storing, marketing research, and marketing management. In addition, these instructional programs include varying emphases on technical knowledge of products or services marketed, related communication and computation skills, and abilities and attitudes associated with human relations and private enterprise.

Health Occupations

This group of instructional programs prepares individuals to assist qualified health professionals in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to patients in health care facilities, the home, and the community. The programs include instruction in dental services, diagnostic and treatment services, medical laboratory technologies, mental health and human services, nursing and related services, and ophthalmic services.

Vocational Home Economics

This is a group of instructional programs that emphasizes the acquisition of competencies needed for securing and holding employment at entry and advanced levels of specific vocations that include: providing services to individuals and families; assisting professional home economists and professionals in fields related to home economics in industry, business, and public and private agencies; and other services and/or assistance directly related to one or more of the home economics subject matter areas. These areas include: consumer and homemaking; child care and guidance; clothing, apparel and textiles; food production; home furnishings and equipment; and institutional, home management, and supporting services.

Trade and Industrial

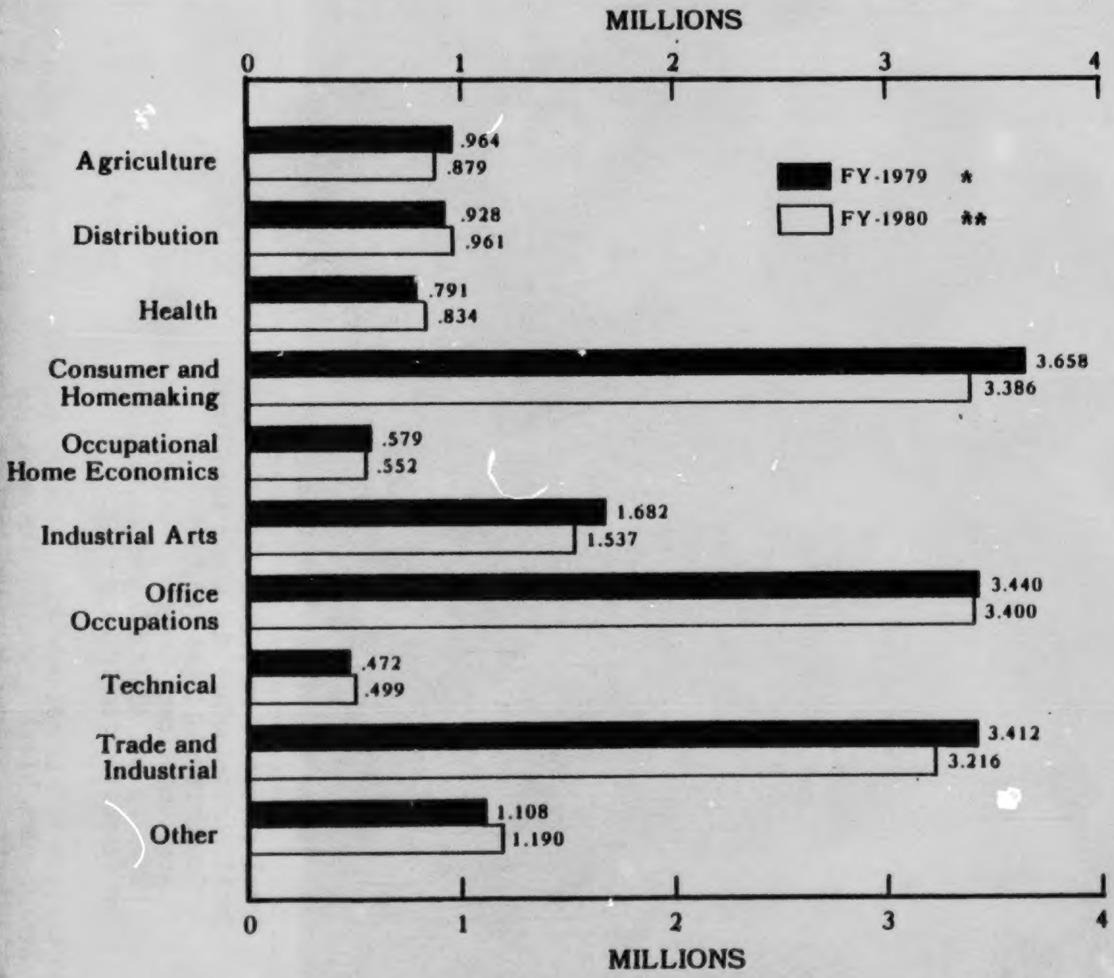
Trade and industrial education involves occupations in both the manufacturing and service sectors of the economy. A large number of occupationally specific programs serve in-school and out-of-school youth and adults who need, want, and can profit from instruction that prepares them to enter or advance in careers for which there is proven labor market demand.

Trade and industrial occupations are classified by levels ranging from operator to skilled craftsperson and technician. Occupations requiring a baccalaureate or higher degree are excluded from Federal support under the Act. Programs in this category not only prepare individuals for industry-related occupational areas such as the construction trades, metal working trades, automotive services, heating and air conditioning, graphic arts, and wood trades, but also for service-sector occupational fields such as cosmetology. Typical functions performed by graduates of these programs include layout, designing, producing, repairing, providing various kinds of personal or public services, and performing as middle managers. Almost all of the apprenticeable trades are found in this category and various types of supervisory training are usually classified as being contained in it. While not restricted to trade and industrial education, both the cooperative method of instruction and entrepreneurship training are very common elements in these programs.

Because of its unusually broad scope and diversity of programs, trade and industrial education has traditionally been judged the central instructional cluster in vocational education. However, because of the decline of the manufacturing sector, accelerating technological change, the shift to service occupations, and the aging of the Nation's population, among other factors, other categories such as technical education and health occupations education are challenging this position of dominance.

Enrollments

In Vocational Education (VEA) By Program Area



Source: NCES/VEDS

* United States and Outlying Areas

** 50 States and the District of Columbia

Chart B

Technical

Programs in technical education prepare individuals to enter the labor market in the occupational area between the skilled craftsperson and the professional such as the physician, the engineer, and the scientist. The program of instruction is designed to prepare a person for a cluster of job opportunities in a specialized field of technology and is usually offered at the postsecondary level.

This concludes the definitions for the seven occupationally specific types of vocational education programs. Chart B (p.9) compares total enrollment by program areas during school years 1978-79 and 1979-80 for these seven areas. Enrollments in marketing and distribution, health occupations, and technical education increased slightly from 1978-79, even though the figures for 1979-80 exclude enrollment from the Outlying Areas. However, there is very little overall change in the enrollment figures for the various programs. The Chart also includes enrollment in the non-occupationally specific programs that are described in the next section.

The concluding part of this section provides an in-depth look at a method of instruction that is becoming increasingly important to all occupationally specific programs in vocational education.

Cooperative Vocational Education

Reauthorized by the Vocational Education Amendments of 1976, cooperative vocational education is planned and supervised by school personnel and consists of periods of employment alternated with study in school. While not a "program" in the same sense as the seven programs defined above, it is a method of instruction that can be used in all such occupationally specific programs. Students enrolled in cooperative vocational education are governed by a written agreement between the school and the employer. Cooperative vocational education provides students with skill development, related classroom instruction and an opportunity to develop attitudes which prepare them for employment.

During the 1979-80 school year, 620,663 co-op students were enrolled in the secondary, postsecondary and adult levels. All occupational areas were included. These cooperative enrollments by level, are as follows:

Total secondary enrollment	522,438
Total postsecondary and adult enrollment	73,225
Community Colleges (63,013)	
Area Vocational Technical Institutes(3,311)	
Evening and Adult Classes (6,901)	
Ten States partially reporting	25,000 (est.)

Cooperative vocational education appears to work very well in motivating students. For these students, the benefits in addition to earnings are very important. These benefits include: having an opportunity to test career goals in a meaningful way before a final career decision must be made; facilitating an effective transition from school to work; fulfilling personal needs and aspirations; developing attitudes and skills essential to satisfactory working relationships; and obtaining a current employment record. For the employing community, participants in cooperative education programs are attractive because they provide employers with a source of motivated employees who can be trained with minimum expense and can be observed prior to full-time employment.

For many communities cooperative vocational education is a practical way to keep some qualified young people in the community. The need to purchase expensive specialized equipment and laboratory facilities in the schools can be reduced, since students receive some of their training using the employers' equipment. Schools can often teach more students in a given facility by carefully scheduling work and school periods. Moreover, immediate application of learning in realistic settings contributes to the instructional process.

According to the latest available data, States reported that the estimated earned wages of cooperative vocational education students was over $2.5 billion during the 1979-80 school year. State and Federal income taxes and FICA taxes are paid on these wages by the students. There is also a return to the economy of the local communities in the form of student purchases and savings.

Through the Targeted-Jobs-Tax-Credit (TJTC) Program, which is part of the Economic Recovery Tax Act of 1981, employers may claim a tax credit for wages paid to employees in nine targeted groups. Students aged 16 but not yet 20, who are economically disadvantaged and enrolled in a cooperative education program, are classified as one of the nine targeted groups. An extension of the TJTC Program as it is applied to cooperative vocational education has been requested by this Administration.

Non-Occupationally Specific Programs

Although economic revitalization needs have spotlighted vocational education's capacity to train students for specific jobs or job clusters, the enterprise has always had a wider scope than this. For many years, it has been concerned with the overall quality of American family life, the introduction of young students into the world of work, and the needs of both youth and adults for professional guidance in selecting careers. Without these non-occupationally specific elements (as well as research and developmental programs that undergird the entire enterprise), vocational education would be little more than skill training tacked onto regular academic education. The programs described in this section are three that received special emphasis in the current Vocational Education Act. As is the case with occupationally specific programs, these programs also are widely used to serve target populations.

Consumer and Homemaking

The goal of consumer and homemaking education is to improve the quality of home life by helping students develop skills in decisionmaking and managing resources. Students are given instruction in a variety of areas of family concern, including nutrition, clothing, housing for the individual and the family, rearing children, and maintaining satisfying human relations. In addition, consumer and homemaking education has an economic benefit in that it assists men and women to prosper in their dual roles as members of the workforce and managers of their households.

In school year 1979-80 there were 3,385,736 students enrolled in consumer and homemaking programs, nearly 1.3 million from economically depressed areas. Because of declining secondary school enrollments, total enrollment in consumer and homemaking decreased by more than 270,000 from the previous year, and enrollments in economically depressed areas decreased by over 165,000.

Consumer and homemaking expenditures totaled more than $501 million in school year 1979-80. Of this total, $43.8 million was Federal funds, and $457.2 million was State and local. Total expenditures increased over $21 million from the previous year, most of which was State and local funds. Federal expenditures increased by $2 million.

Consumer and homemaking programs have historically served many disadvantaged and minority persons. In addition, the program has been adapted to serve the needs of such diverse populations as single parents, teenage mothers, divorced parents, and dual wage earners. States have made efforts to meet the unique needs of these populations by offering classes in convenient locations. Neighborhood centers, Indian reservations, senior citizen centers, churches, homes, migrant camps, and even mobile units have been used to provide consumer and homemaking programs to those who need them. Programs have been "taken to the people" wherever they could be reached in groups.

Industrial Arts

Industrial arts curricula provides experience based upon nationally relevant economic/industrial clusters such as construction, manufacturing, communication, and transportation. The program involves the occupational orientation, growth, and guidance of students for modern industrial society. It does this through an instructional program that includes the technical, consumer, occupational, vocational, organizational, social, historical and cultural aspects of industry and technology. While industrial arts builds upon and fosters general education learning experiences, its scope and sequence are directly related to vocational, technical and career education concepts.

In school year 1979-80, a total of $172.5 million was expended on more than 1.5 million pre-vocational industrial arts students. The Federal portion of this expenditure was $5.4 million. These funds were used to expand career guidance services, improve the quality of instruction, and develop individualized instruction.

The U.S. Department of Education, through OVAE, has supported and participated in the development and validation of program standards for industrial arts. Instructional programs can now be consistently assessed against these standards. In addition, three instructional guides were developed. The first assists classroom teachers in making the American Industrial Arts Student Association an integral part of the curriculum. The second alerts industrial arts educators to the vital role they can play in increasing awareness of career options for all students. This guide provides technical assistance to help teachers increase female participation in industrial arts programs and assure equitable treatment of females and males. The third guide assists in the overall development of appropriate industrial arts programs for special needs populations. Industrial arts professionals have responded positively to the standards and the accompanying guides, and have accepted them for use in their programs. Professional associations are holding regional workshops on how to implement the standards at the local level.

The expanding use of industrial arts to support vocational education has caused a shortage of qualified teachers. This shortage was documented at 1,500 at the beginning of school year 1980-81. The professional associations, in cooperation with the Office of Vocational and Adult Education, are working to develop strategies to overcome this problem.

Guidance and Counseling

Guidance and counseling is a mandated supportive service under the Vocational Education Act. These services are intended to improve a State's vocational education program by providing assistance directly to students to help them realistically choose their future occupations.

Because of the structure of the Vocational Education Data System, no information is collected on actual numbers of students who receive guidance and counseling services. However, all States expended funds for this purpose in school year 1979-80. During this school year, $254 million was spent for vocational guidance and counseling services, compared to $216.3 million during school year 1978-79. However, the Federal share of this total expenditure decreased from $41.1 million to $40.7 million during this same interval. Consequently, the Federal percentage dropped from 19 percent in 1978-79 to 16 percent in 1979-80.

Typical services provided with guidance and counseling funds include: career counseling for adults, handicapped, and disadvantaged students; development of career information materials; workshops for counselors, teachers and administrators to acquire skills for implementing comprehensive career guidance programs; and dissemination of career information.

The Department of Education also funded vocational guidance and counseling projects as part of the Projects of National Significance. One project continuing in 1981 was "Guidance Team Training with Emphasis on Guidance for Vocations and Learners with Special Needs." As a result of this project, community teams developed and implemented plans which helped them improve the career guidance programs in their own communities. Detailed information on how these teams developed and implemented their action plans is available for use by other communities that wish to improve their guidance services.

This project has had numerous positive effects on the community agencies involved, the citizens, and the team members. The community agencies shared funds, staff, and facilities with other organizations; developed new products; modified their goals, plans, and priorities as necessary; and used training modules from the National Center for Research in Vocational Education. The citizens involved received information about a career guidance program in their community; talked and worked together for the first time; showed greater awareness of community career guidance needs; demonstrated more positive attitudes toward career guidance; participated in career guidance activities; and made constructive changes in their careers and lives. Team members reported positive outcomes such as changed attitudes towards career guidance; new knowledge of available community resources; new visibility and credibility in the community because of membership on the team; and being asked to join or make a presentation to other groups and provide training to the staff or representatives of community organizations.

Target Populations Programs

As previously stated, much of the current Vocational Education Act focuses on target or priority populations that the system as a whole must include, while providing services to all populations. The previous two sections have described the basic programs that serve these populations. These basic programs are adjusted for these special groups of students either by adding supplementary services or by modifying facilities and equipment. In a few instances (e.g., educable-retarded students), curriculum content is changed. The Act's sex-equity thrust required still different approaches; for example, changing admission requirements, revising recruitment and instructional materials to avoid sex stereotyping, and providing incentives for nontraditional programs.

In any event, it should be understood that this section, while describing several actual programs such as those for Indians and Appalachia, largely reports on how vocational education is serving special kinds of students. The use of the term "programs" in regard to these students does not imply the existence of a third major type of vocational education completely separate from those already described in the preceding two sections.

Handicapped Students

Making the transition from school to work is a major step for most young men and women, but especially so for those who are handicapped. These handicapped students must have employment skills if they are to compete in the job market. Vocational education has the major role for teaching handicapped youth who are enrolled in school the specific job skills that will help them become employed.

During school year 1979-80, 400,575 handicapped students were served in vocational education. This figure is significantly different from both the 1978-79 total of 235,988, and the 1977-78 total of 360,151. However, the previous enrollment figures must be viewed with some caution because of inconsistent practices among States in counting handicapped enrollments. Beginning with the 1978-79 school year, all handicapped students served were to be reported. Some States, however, counted only those students receiving supplementary services. This confusion was largely corrected in 1979-80.

A profile, by handicapping condition, of all handicapped students enrolled in vocational education shows the same distribution as those served by non-vocational special education. According to the Vocational Education Civil Rights Survey, 1979, slightly over 36 percent of all handicapped persons enrolled in vocational education in comprehensive high schools and area vocational centers are mentally retarded and 37 percent have a specific learning disability such as dyslexia. Of the remainder, 7 percent are seriously emotionally disturbed, 2 percent are orthopedically impaired, 3 percent are visually handicapped, and 4 percent are deaf or hard of hearing. Another 10 percent are "other health impaired" and 5 percent are multi-handicapped.

Federal expenditures in the 1979-80 school year for supplementary or excess-cost services for handicapped students totaled more than $63 million, an increase of $10 million from 1978-79. State and local expenditures increased by $11 million to a total of $132 million in 1979-80. See Table 3 (p.18) for a comparison of the expenditures in these two school years.

Vocational education has progressed in serving handicapped persons during the past decade. Significant progress has been made in three areas: (a) developing awareness of the need and responsibility to integrate handicapped persons into the vocational education population; (b) developing positive attitudes toward serving the handicapped; and (c) learning to teach handicapped students in regular vocational education classes.

The main tool for measuring success in educating the handicapped is still enrollment. Enrollment figures, however, tell only part of the story. The frequency of mainstreaming is another success indicator.

The National Institute of Education (NIE) in its study on vocational education identified the excess cost provisions as disincentives for mainstreaming the handicapped. However, States do not appear to have responded to the excess cost provisions in the manner predicted. According to the 1979-80 VEDS data, 78 percent of handicapped students served in vocational education are in mainstream programs. Abt Associates, Inc., in a study funded by NIE, Implementation of the Education Amendments of 1976: A Study of State and Local Compliance and Evaluation Practices, December 1980, indicated that States were reporting progress in increasing the mainstreaming of handicapped students. It appeared that States were using Federal [illegible] to sponsor fewer separate programs than previously.

The National Institute of Education also identified the separate matching provisions for the setasides as a potential burden on the States and localities. Many States thought the matching provisions would make it difficult to spend the setasides. NIE stated that, "Nonetheless, many States have had no problems generating the required match, and few seem to have burdened needy LEA's." State officials indicated that, "... the problem stems from the lack of clear examples of and consistent technical advice on permissable excess cost expenditures."

As the Department of Education provided technical assistance and the States gained experience in administering this Act, the potential problems with the matching requirements were avoided. VEDS data from 1978, 1979, and 1980 indicated that most States were able to match the Federal excess cost funds.

In 1978, 49 States met the matching requirements and 48 overmatched. In 1979, 49 States met the matching requirements and 45 overmatched. Preliminary data for 40 States for 1980 show that 39 met the match and 35 States overmatched. The 1980 data are not final and are subject to change. Of the total nationwide Federal setaside of $51,662,911 in 1978, only .74 percent lapsed. In 1979, of the $53,833,996 total Federal setaside, only .26 percent lapsed. Preliminary data for 1980 indicate that approximately .24 percent may lapse. This figure may change when final 1980 financial reports are received from all States.

Disadvantaged Students

In addition to handicapped students, there are many other youth and adults who are unable to compete for jobs that provide adequate pay and lead to careers with a future. In many instances, these persons suffer from limited or poor educational backgrounds or limited proficiency in English. Included in this group are a large number of ethnic minorities such as Native Americans, Blacks, and Hispanics. Other disadvantaged groups include migrants, persons in correctional institutions, and those from rurally isolated geographic areas.

The Department of Labor's August 1981 statistics indicate that minority teenagers have an unemployment rate of 45.7 percent, which represents 414,000 young people. The unemployment rate for black adult workers was a record 15 percent. Some minor part of this unemployment may reflect temporary economic conditions. However, for many unemployed young persons,it reflects lack of preparation for available employment opportunities which require a higher degree of skill than they have had the opportunity to acquire.

During school year 1979-80, the number of disadvantaged persons served under the Vocational Education Act was 2,038,943. In addition, the number of persons served having limited English proficiency (LEP) was 72,731. Unfortunately, these figures cannot be compared with those from earlier years because of the inconsistent reporting practices mentioned in the section on handicapped students. An additional 70,521 disadvantaged students were served in 1979-80 with Special Disadvantaged funds under Section 140 of the Vocational Education Act. This section permits 100 percent funding of these special programs with Federal monies, although some State funds are also used. The 1979-80 enrollment figure under Section 140 is considerably lower than the 152,970 reported for the 1978-79 school year. However, this decrease may only reflect uncertainties in reporting procedures as well as problems experienced with this particular data element in the Vocational Education Data System.

Expenditures for disadvantaged students increased between 1978-79 and 1979-80. In 1979-80 $474.4 million was spent to benefit the disadvantaged (Section 110), $109.7 million Federal and $364.7 State and local funds. This is a total increase of over $57 million from 1978-79. Expenditures for LEP increased in 1979-80 to $5.2 million Federal and $20.3 million State and local funds, a total increase of $4.2 million. (See Table 3 (p. 18)). Section 140, Special Disadvantaged expenditures, totaled over $34.5 million in 1979-80. Federal expenditures amounted to over $21.8 million of this total; and although the law does not require matching for these funds, the State and local contribution amounted to more than $12.8 million. Overall expenditures for the Special Disadvantaged increased by $4.8 million from 1978-79, almost all of which was Federal funds.

The Vocational Education Amendments of 1976 emphasize the mainstreaming of all students in regular classes. A number of States are using vocational education money for the disadvantaged to provide learning labs in which students can be given remedial assistance in the basic subjects of math and reading while enrolled in regular vocational education programs. Tutorial assistance is also provided in postsecondary institutions to help students keep pace with their peers in more technical subjects. Vocational education funds have supported these and other activities to help the disadvantaged obtain education and training for jobs with a future.

Table 3 Total Federal and State/local vocational education expenditures (including carryover funds) for handicapped, disadvantaged, and limited English proficiency (LEP) students under Section 110 (VEA), 1978-79 and 1979-80 school years, United States and Outlying Areas

School year	Total expenditures*	Federal	State/local
Handicapped			
1978-79	$174,303,824	$53,140,457 (30.5%)	$121,163,367
1979-80	195,258,069	63,063,123 (32.3%)	132,194,946
Disadvantaged			
1978-79	416,993,085	104,954,394 (25.2%)	312,038,691
1979-80	474,429,777	109,747,915 (23.1%)	364,681,862
Limited English proficient			
1978-79	21,280,623	3,878,992 (18.2%)	17,401,631
1979-80	25,497,283	5,163,792 (20.3%)	20,333,491

* All figures in this table cover excess costs for supplementary services, only. Beginning in 1978-79, only these monies were to be reported for national priority populations.

U.S. Department of Education, National Center for Education Statistics

Displaced Homemakers and Other Special Student Groups

The Vocational Education Act mandates the provision of special services for displaced homemakers and other special groups such as single heads-of-households, homemakers and part-time workers who wish to secure full-time jobs, and persons seeking jobs in nontraditional occupations.

According to the most recent (1979) data available from the Department of Labor, 11 million women are disadvantaged financially and in need of job skills. Of that 11 million, the data indicate that approximately 5 million are displaced homemakers--widowed, separated, or divorced. The Vocational Education Data System (VEDS) reported that over 42,000 displaced homemakers were served in vocational education during the 1979-80 school year.

According to a 1981 survey conducted by the National Displaced Homemakers Network, nearly 400 programs throughout the country provide counseling, workshops, skills training, and job placement assistance to displaced homemakers. These programs are situated at women's centers, YWCA's, vocational technical schools, community and 4-year colleges and universities. Often, vocational education programs are coordinated with State and CETA funded projects and involve training in nontraditional occupations. Vocational training enables displaced homemakers and others to contribute to the economic revitalization of the country and to help address the critical shortage of skilled craft workers.

VEDS data show that vocational education expenditures for displaced homemakers decreased slightly from school year 1978-79. A total of $10,079,507 was spent in school year 1979-80 as compared to $11,794,551 in 1978-79. Federal funds comprised 31.1 percent of the total amount spent in 1979-80 as compared to 15.6 percent in 1978-79, since nonfederal funds decreased by $3,012,967 in school year 1979-80.

Programs which provide displaced homemakers with education and training, equal access to jobs, and income maintenance have proved themselves to be viable routes from public dependency to self-sufficiency and economic independence.

Bilingual Vocational Students

Bilingual vocational training prepares persons with limited English proficiency to perform adequately in a work environment which requires English language skills. In fiscal year 1980 $4.8 million in Federal funds were appropriated for this program, all of which was issued as discretionary grants by the Secretary. These funds were used for 15 bilingual vocational training projects for a total of $3.1 million, 7 bilingual vocational instructor training projects for a total of $1.2 million, and 2 instructional materials development projects for a total of $403,000.

These 1981 projects provided specific vocational job skills to 1,372 unemployed and underemployed persons who spoke Spanish, Chinese, Indian, Korean, Asian, or other languages. Each trainee learned the skills in occupations such as dental assistant, chef, auto mechanic, electrician, or refrigerator repairer. In addition to teaching skills, the projects offered job counseling, job placement, and followup services.

The seven bilingual vocational instructor training projects prepared 268 teachers to qualify as instructors for such programs. These projects were conducted in local education agencies, institutions of higher education, private nonprofit vocational training institutions, and organizations and agencies that specifically serve persons whose native language is other than English. These instructor training projects helped both bilingual vocational instructors and teachers of job-related English as a second language to learn the skills they needed to develop their own bilingual vocational curricula and teaching techniques. Languages other than English in which the instructor-trainees were fluent included Spanish, Indian, Chinese, and Vietnamese, among others.

Of the two instructional materials development projects funded, one will identify occupations in which a foreign language is an asset; the other will determine successful strategies for using outside agencies for outreach services for bilingual vocational training programs.

According to the findings of a study by InterAmerica Research Associates, the job placement success rate for trainees in eight Federally funded projects ranged from 85 to 100 percent.

Annual independent evaluation reports indicated that an average of 95 percent of trainees complete their training. In addition, followup reports from project directors showed that trainees pay back the cost of their training through taxes within 1 to 3 years.

Incarcerated Students

Another population group that has benefited from vocational education are inmates in correctional institutions. To help this group, a corrections program was established in the Department of Education in December 1980 in cooperation with the National Institute of Corrections (U.S. Department of Justice). The ED corrections program provides coordination and information services to the field of correctional education in order to increase the quality and quantity of academic, vocational, and basic skills programs for the Nation's 593,458 adult and juvenile prisoners.

The people served by this program have various degrees of educational, skill, and employability deficiencies. According to the National Institute of Corrections, approximately 61 percent of the prison population completed less than 12 grades of school; 32 percent of the incarcerated were unemployed at the time of arrest in 1981; 55 percent of inmates earned less than $6,000 at the time of arrest in 1981; and 47 percent of the prison population in 1980 was black. Most vocational programs for incarcerated offenders are located in prison facilities rather than in community programs. In 1979-80 about 12 percent of the adult inmates were enrolled in vocational education. On the average, States spend 1.5 percent of their total correctional budget on inmate education and training programs.

A few efforts have been undertaken to study the effects of vocational education on the post-release success of ex-inmates. The National Center for Research in Vocational Education has reported the findings of several studies that suggest that, when inmates secure employment in a job for which they are trained, recidivism rates decrease. The data also suggest that inmate work assignments in semi-skilled maintenance or industry jobs result in lower recidivism rates than those with work assignments in unskilled jobs.

Although most of these surveys describe specific programs and do not constitute systematic research, the results suggest that vocational education plays a role in reducing recidivism.

Equal Access Thrust

Equal access initiatives are a relatively new aspect of vocational education. The Vocational Education Act, as amended in 1976, authorized States to spend Federal funds to ensure equal access. The Act attempts to integrate equal-access concerns into every part of the vocational education system. State sex equity coordinators, along with school administrators and faculty, students, parents, employers, and advocacy groups, have been working jointly to remove sex-biased barriers and to promote full participation of males and females in all vocational education programs.

Although total enrollment in vocational education decreased, female enrollment in vocational education increased during the 1979-80 school year. In 1978-79, female enrollments, excluding adult short-term students, were 50.80 percent of the total. In 1979-80, female enrollments were 51.56 percent of the enrollments identifiable by sex.

During the past 5 years, female enrollments in vocational education have not only been increasing, but changing as well. Females now represent over 51 percent of postsecondary and adult vocational education students. This growth has occurred partly because vocational educators have made a concerted effort to increase female enrollments, especially in nontraditional programs.

According to preliminary data for school year 1979-80, almost 37,000 women received support services at a cost of nearly $2.4 million. Preliminary data for day care services shows that 3,762 students received these services, and expenditures totalled nearly $1.6 million.

Although sex-equity programs at the State level vary in expenditures, audience, and results, all States reported Federal expenditures for full-time sex equity coordinators, and eight States also reported State and local expenditures for this purpose. These coordinators provide technical assistance, resource materials, and encouragement for local cooperation.

Table 4 (p. 22) shows the increase from 1977 to 1980 in the percent of female and male enrollments at all levels in vocational programs that have previously been underutilized by either sex.

In addition to direct expenditures for services to students, States have the option of using program improvement and supportive services funds (Section 130) on grants to overcome sex bias. In fiscal year 1981, 35 States planned to spend $2,339,986 of these Federal funds on grants to overcome sex bias. In 1979-80, $2.1 million Federal and $1.8 million State and local funds were spent for this purpose.

The following examples show some of the creative ways by which States have promoted sex equity in vocational education.

California - The "World of Apprenticeship" is California's film series contribution to sex equity. It includes presentations on operating engineers, the culinary trades, carpenters, and the automotive trades. California is one of the model States for developing cooperative programs between labor agencies and vocational education to recruit females into nontraditional occupations. They also have 600 trainers ready to conduct in-school workshops.

Maryland - Maryland has almost 40 percent female enrollment in postsecondary trade and industrial programs. The "New Directions for Women" center for displaced homemakers in Baltimore has provided services to over 4,000 women since 1976. As part of its comprehensive program, the center trains displaced homemakers to present sex equity workshops for high school students.

Missouri - This State received $100,000 worth of free public service announcements on television and radio that featured vocational education projects geared to promote equal access. In addition, State priorities for projects encouraged nontraditional enrollments and included handbooks for recruiting females into trade and industrial programs and males into health occupations. Twenty local educational agencies received additional program funding as a result of increasing their nontraditional enrollments by at least 10 percent.

Special projects and products, such as those described above, have served as model programs to ensure equal access for both sexes to all vocational programs and activities.

Table 4 Percent of female and male vocational education enrollments in nontraditional programs, 1977-1980

FEMALE

PROGRAM	1977	1978	1979*	1980**
Agriculture	14.9	17.2	19.2	19.6
Distributive education	49.7	51.5	53.6	54.7
Technical education	17.0	17.6	19.4	21.1
Trade and industrial	14.4	15.4	17.5	18.5

MALE

PROGRAM	1977	1978	1979	1980
Consumer and homemaking	18.4	19.5	20.6	22.0
Occupational home economics	16.1	17.6	22.1	21.4
Office	24.9	24.4	26.5	26.3
Health	21.8	22.1	15.7	21.0

* Does not include adult short-term enrollments.
** Does not include 949,500 students whose sex was unreported.

U.S. Department of Education, Office of Vocational and Adult Education, and the National Center for Education Statistics

Appalachia Program

The Appalachian Regional Commission (ARC), from its beginning in fiscal year 1965, concentrated its major education efforts on constructing and equipping facilities for vocational education. This concentration reflects the strategy of ARC to promote economic development in Appalachia by helping to provide a skilled work force. During the mid 1970's the program was expanded to include education demonstration projects.

In fiscal year 1981, 63 projects were funded in 11 States. Support for these projects included $1.4 million in Federal vocational education funds, $9.6 million in State and local money, and $9.6 million from the ARC. Some projects served entire school districts while others served individual schools or programs. Ten schools received funds to build additions, which enabled them to serve an additional 2,800 students. The 53 demonstration projects served over 11,000 students.

One example of an ARC demonstration project is a program for curriculum improvement and training for skilled workforce needs in solar energy. This secondary program is operating in four high schools in the ARC region in North Carolina. In 1980 two additional schools in the North Carolina ARC region received consultant services. The purposes of the State-sponsored curriculum were to train students in installation, service, and maintenance of solar energy systems and energy efficient climate control systems, and to promote public awareness of energy conservation and efficiency.

One hundred and thirty-nine students were enrolled in this program during school year 1980-81. The two schools receiving consultant services enrolled an additional 66 students. Students were trained in solar energy through skills drawn from traditional vocational subjects, primarily heating, ventilation, and air conditioning. Students also constructed displays to educate the public and exhibited their works at the State Fair, a regional energy fair, and a community energy exposition. Over 600,000 people had an opportunity to view these exhibits and learn more about solar energy.

Public awareness of this project was greater than anticipated. Instructors served as solar energy resource persons for their communities and numerous calls for information were received. Instructors and students also helped to reduce energy consumption in their communities by performing energy audits on schools, churches, and private homes; by installing solar systems on school buildings; and by making efficiency adjustments of oil-fired generators in community buildings and churches. This demonstration project not only trained skilled workers but also developed curriculum materials and increased public awareness of solar energy.

The ARC program as a whole has involved local development districts in planning the area vocational school facilities and programs. This community involvement and support has contributed to program success by linking vocational education with the training needs of the community. The ARC program has helped reverse the out-migration of people and has helped to supply a trained work force which, in turn, has contributed to the overall economic improvement of the Appalachian Region.

Programs for Indian Tribes and Indian Organizations

The Vocational Education Act provides programs for Indians through discretionary grants that are awarded to tribes and tribal organizations by the Secretary. During fiscal year 1981, 34 grants were awarded to tribal organizations in 15 States. These projects will be operated during fiscal year 1982. Total Federal funds amounted to nearly $7 million.

More than 6,000 Indian youth and adults have participated in this vocational education program since it began in 1978. Students acquire skill training and career awareness, and receive counseling and placement services. Bilingual training in a variety of vocations is part of the program. In addition, instructors and project directors receive inservice training.

Indian youth and adults who receive supportive services and vocational skill training seek entry level jobs both on and off the reservations. The training they receive is focused on those jobs which are identified by tribal economic development planning as needed by the tribe. Vocational training thus provides skilled workers for existing jobs and also promotes entrepreneurship for those new enterprises needed for economic development of the reservation. Vocational education, by providing skilled workers, has been judged through national evaluations to be an effective tool for achieving the economic development which increases self determination for Indian tribes and tribal organizations. The program has also aided in promoting collaborative linkages between State education agencies and tribal organizations.

VOCATIONAL STUDENT ORGANIZATIONS

In 1974 the U.S. Office of Education established a policy that recognized vocational student organization activities as an integral part of vocational instructional programs. This policy, revised to include the addition of the ninth vocational student organization (The National Postsecondary Agriculture Student Organization), was issued as follows by Secretary T.H. Bell on September 28, 1981:

> "Policy Of The United States
> Department Of Education
> For Vocational Education Student
> Organizations
>
> The United States Department of Education maintains a close relationship with nine vocational student organizations and welcomes their cooperation and support in strengthening programs of vocational education. Recognizing that the past performance and future potential of these nine organizations are compatible with the overall purposes and objectives of education today, the United States Department of Education strongly endorses their objectives and seeks to involve their thinking in the improvement of Vocational Education.

In view of this, these policies represent the position of the United States Department of Education.

1. The United States Department of Education recognizes the educational programs and philosophies embraced by the following vocational student organizations as being an integral part of vocational education instructional programs.

    American Industrial Arts Student Association
    Distributive Education Clubs of America
    Future Business Leaders of America-Phi Beta Lambda
    Future Farmers of America
    Future Homemakers of America
    Health Occupations Students of America
    National Postsecondary Agriculture Student Organization
    Office Education Association
    Vocational Industrial Clubs of America

2. The United States Department of Education recognizes the concept of total student development as being necessary for all vocational education students to assume successful roles in society and to enter the labor market.

3. The United States Department of Education will provide technical and supportive services to assist vocational student organizations and State agencies in their efforts to improve the quality and relevance of instruction, develop student leadership, enhance citizenship responsibilities, overcome sex and race discrimination and stereotyping, and serve students of special populations.

4. The United States Department of Education recognizes the responsibility for vocational instructional programs and related activities, including vocational student organizations, rests with the State and local education agencies.

5. The United States Department of Education approves of Federal and State grant funds for vocational education to be used by the States to give leadership and support to these vocational student organizations and activities directly related to established vocational education instructional programs at all levels under provisions of approved State plans for vocational education.

Efforts on the part of State and local education agencies to recognize and encourage the growth and development of these vocational student organizations are highly important and deserve the support of all leaders in American Education."

Vocational student organizations recognized by the Department of Education are:

ORGANIZATION	STUDENT MEMBERSHIP (1980-81)
Agriculture	
Future Farmers of America (FFA)	482,611
National Postsecondary Agriculture Student Organization (NPASO)	83,000
Business, Office	
Future Business Leaders of America (FBLA)	200,000
Office Education Association (OEA)	74,256
Distributive Education	
Distributive Education Clubs of America (DECA)	177,770
Health Occupations	
Health Occupations Students of America (HOSA)	28,079
Vocational Home Economics Education	
Future Homemakers of America (FHA) and Home Economics and Related Occupations (HERO)	393,253
Industrial Arts	
American Industrial Arts Student Association (AIASA)	21,665
Trade and Industrial Education	
Vocational Industrial Clubs of America (VICA)	260,687
TOTAL	1,721,321

Vocational student organizations not only help secondary, postsecondary, and adult students to develop vocational competencies, but also leadership and communication skills. Special achievement programs are designed to motivate students, supplement the instructional programs, encourage leadership, and involve business, industry, and the public. Students are provided opportunities for growth and development in learning civic and citizenship responsibilities through participation in national initiatives of their respective organizations.

"Building Our American Communities" is one example of an achievement program of the Future Farmers of America (FFA). Future Homemakers of America and Home Economics and Related Occupations (FHA/HERO) chapters were involved in activities such as the Youth Employment Project, "Healthy Babies - Chance or Choice," conducted in cooperation with the March of Dimes, as well as drug/alcohol abuse projects, suicide prevention, and student nutrition projects.

The Distributive Education Clubs of America (DECA) promoted projects on civic consciousness, shoplifting prevention, free enterprise, and learn-and-earn. The Future Business Leaders of America (FBLA) sponsored activities designed to increase economic awareness and foster the concepts of the free enterprise system with activities around the theme "In Touch with the Business of America."

The Office Education Association (OEA) sponsored hundreds of mentally retarded athletes to the Special Olympics summer games. The Health Occupations Students of America (HOSA) co-sponsored with the Health Insurance Institute many community awareness projects that encouraged chapters to plan and implement health-related projects to aid their communities in becoming more aware of current health issues.

In June 1981 The Vocational Industrial Clubs of America (VICA) held its 17th annual National Leadership Conference and United States Skill Olympics at the Georgia World Conference Center in Atlanta. Of the 7,000 delegates, contestants, advisors and technical committee members attending the event, 2,359 secondary and postsecondary students competed in 36 separate contests of occupational skill proficiency. In addition, this was the first year that VICA, the official United States' representative to the International Skill Olympics (since 1975), had hosted the international competition. Two hundred and seventy-four international contestants from 14 nations competed in 33 skill events.

All of these activities provided vocational students with "hands on" learning situations which enriched classroom instruction, promoted the transition from school to work, and resulted in greater community involvement.

TEACHERS

In the 1979-80 school year, there were 378,061 full-time and part-time teachers in publicly supported vocational education institutions in the 50 States and the District of Columbia. While this constitutes an apparent increase of almost 51,000 teachers compared to those reported for the 1978-79 school year for the United States and the Outlying areas, the Vocational Education Data System (VEDS) was being validated and modified when that year's data were being collected. Therefore, the actual difference between the 2 years is not known. Except for the 1978-79 school year, Chart C (p. 28) suggests that the trend since 1972 has been a steady increase. The situation in 1979-80 wherein more teachers are apparently being employed to train slightly fewer students (compared to 1978-79) is thought to have occurred because of the rapid increase of part-time instructors in postsecondary and adult programs.

Analysis of the VEDS data shows that postsecondary programs rely heavily on part-time instructors (52 percent of the total number). Because the secondary programs were belived to have so few part-time teachers, data on part-time teachers were not even collected at the secondary level. Because of the rapid growth in postsecondary vocational and technical education, there are now almost as many teachers in these institutions as in secondary programs (49 percent in 1979-80). Roughly an equal number of part-time instructors are added to postsecondary programs for each single full-time instructor. Many of the part-time staff continue to hold regular positions in private industry. This implies that any problem of insufficient preparation for these part-time persons will not be so much in the technical as in the pedagogical area.

Teachers In Vocational Education (VEA)

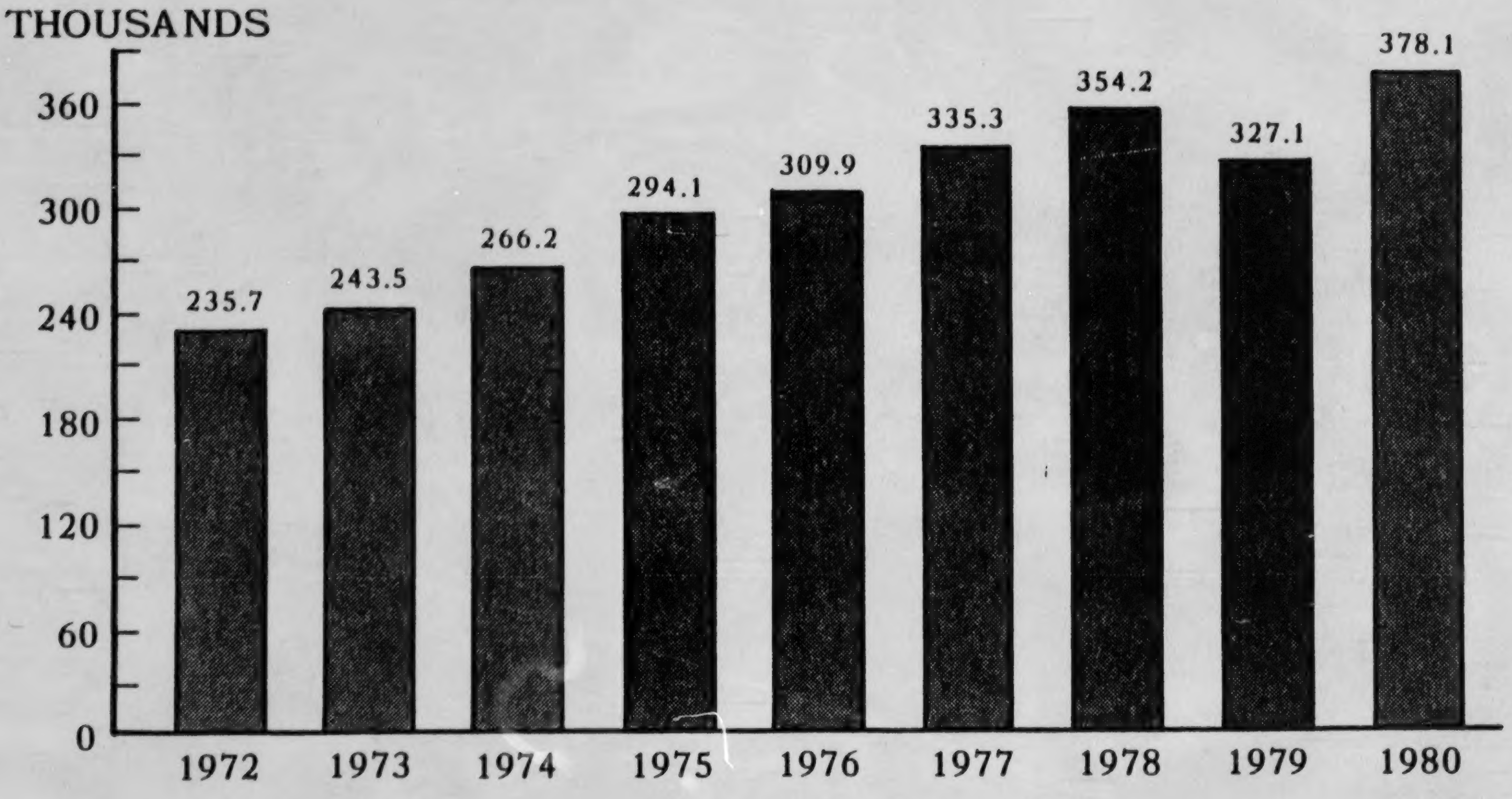


Chart C

Source: NCES/VEDS FY-80

The status of teachers at the secondary level is more complicated. While the annual turnover rate for vocational education is approximately in the 10-14 percent range, there are sharp differences between specific programs. For example, trade and industrial teachers tend to remain in teaching once they have had a few years' experience, while many vocational agriculture instructors reportedly leave the profession by age 30. Although vocational agriculture seems to have this special problem, the more common problem at the secondary level (especially in trade and industrial education) seems to involve updating the technical skills and knowledges of older instructors.

There are other teacher-related problems in vocational education. In the area of sex equity, a closer look at the VEDS tables reveals that female teachers are still concentrated in traditional fields such as office occupations, occupational home economics, consumer and homemaking, and health. Given the expected shortages that an expanding economy is projected to cause, more emphasis must be given to attracting females into nontraditional programs in trade and industrial education. In the area of teaching the handicapped, a recently completed Department of Education contract reveals that vocational instructors themselves feel that they need added skills in teaching these students. While no hard data are available, reports indicate similar problems involved with instruction of minorities and students with limited English proficiency, particularly Hispanic.

FACILITIES AND EQUIPMENT

Vocational education programs are offered in numerous types of institutions both public and private. The National Center for Education Statistics reported that there were 27,753 institutions that offered vocational education in school year 1978-79. This total includes programs in public, private, 2-year, 4-year, correspondence, and correctional facilities. The following table provides information on the numbers of schools in each category. Almost two-thirds of these institutions were at the secondary level and virtually all of the public secondary institutions offering vocational programs received Federal funds under the Vocational Education Act.

According to the National Center for Education Statistics, the receipt of Federal funds under the Act, at the postsecondary level, is variable depending on the type of institution. It is estimated that over three-fourths of the 2-year public institutions of higher education receive such funding, but only two-fifths of public noncollegiate postsecondary schools and less than one-third of State correctional facilities. Only about 5 percent of 4-year institutions of higher education receive such funding and virtually none of the private noncollegiate postsecondary schools or correspondence schools. However, it should be noted that eligible recipients under the Act (which prohibits direct distribution of VEA funds to private institutions) can buy instruction from proprietary institutions under contract arrangements. The Vocational Education Data Systems does not collect this kind of data.

Table 5 Number and percent of secondary and postsecondary institutions offering vocational education programs, by control and type of institution

Control and type of institution: 1978-79	Number	Percentage distribution
All institutions	27,753	100.0
Public comprehensive or vocational high schools	15,729	56.7
Public area vocational centers (secondary)	1,395	5.0
Private secondary schools	586	2.1
Public noncollegiate postsecondary institutions	812	2.9
Private noncollegiate postsecondary institutions	6,813	24.6
Correspondence schools	83	0.3
2-year institutions of higher education	1,135	4.1
4-year institutions of higher education	647	2.3
State correctional facilities	553	2.0

U.S. Department of Education, National Center for Education Statistics, The Condition of Vocational Education, 1981

Construction expenditures in 1979-80 for area vocational schools, as defined by the Act, amounted to $13.8 million in Federal funds and $122.6 million in State and local funds. This is a decrease of $27 million from 1978-79 and $54 million from 1977-78. Although some new vocational schools have been constructed and equipped, the major portion of the 1979-80 expenditures was used to remodel, expand, and update existing facilities.

A National Study of Vocational Education Systems and Facilities, 1978, by the Department of Health, Education and Welfare, estimated that 64 percent of all institutions were in good condition with 24 percent needing minor maintenance. However, 21 percent of institutions in central cities with a metropolitan population over 100,000 needed major maintenance or replacement. Since expenditures for construction are decreasing rapidly, it seems unlikely that this situation will change much in the near future.

Equipment in vocational-technical schools generally has a life span of about 10 years. Modern technology, however, tends to outdate equipment long before that. Some school systems do manage to keep pace with modern technology by continuously updating their equipment. That some school systems are able to keep current with business and industry is largely due to the initiative of progressive local educators and the support of the private sector.

PROGRAM IMPROVEMENT

Program improvement may be defined as any activity that is intended to increase the quality of any vocational education program component. These activities range from research, development, testing, and evaluation through personnel development. While they may occur singly at any governmental level, most involve a partnership between the State and Federal levels. Experience has proved that products and approaches which are both practical and systematically diffused into local instructional programs have a strongly positive impact on the quality of vocational education.

State Board Evaluation

In fiscal year 1980, all States conducted some level of evaluation of their vocational education programs as required by the Vocational Education Act. A review of the 1980 accountability reports was conducted to determine the impact of State evaluations on programs. Out of 40 States involved, 35 used evaluation results for improving vocational education instruction, support services, planning, and access. Improvements were also made in the following areas: research; exemplary programs; curriculum; vocational education personnel development; inservice teacher training; and teacher certification/qualification.

Thirty-two States used evaluation results to improve instruction. Examples of revisions included: improving student/teacher ratios; remodeling classrooms and shops; enlarging facilities; buying new equipment; rearranging equipment for safety; updating lesson plans; providing competency based instruction; developing and improving use of vocational student organizations; and improving use of employers in the classroom as resource persons.

Thirty States improved support services by using evaluation results. Typically, improvements occurred in the following services: guidance and counseling; placement; followup; recruitment; and admissions.

Thirty-eight States used evaluation results to improve program planning. Examples of changes in planning included: better articulation between secondary and postsecondary programs; expansion and redirection of programs; revisions of local applications; better data collection and analysis; improvement of long-range planning; improvement of coordination between education, business, and industry; examination of evaluation procedures; establishment of local advisory councils; and revising goals and objectives.

Twenty-eight States improved access through the use of evaluation results. Examples of actions which occurred included: inservice training for teachers to enable them to better serve special needs students; addition of special projects for disadvantaged and handicapped students; increased enrollments of handicapped and nontraditional students; revisions in programs for students with limited English proficiency; and improvements in programs to improve sex-equity and serve the needs of displaced homemakers.

Although all States have conducted evaluations and used the results to improve their programs, many States have had difficulty in meeting the complex requirements of the regulations. Some States, of course, have been more successful than others. In addition, on-site reviews have shown that several States have more extensive evaluation systems than their accountability reports indicate. This suggests that there may be a reporting burden in addition to the complexity of the evaluation requirements themselves. Both of these problems may be alleviated when the deregulation efforts of the Department are completed.

State Research Coordinating Unit Projects

The Vocational Education Act authorizes States to fund activities and projects which will improve vocational education programs. State program improvement activities include research, exemplary and innovative programs, and curriculum development.

In school year 1980-81 States used approximately $24.6 million in Federal funds to conduct 899 State program improvement projects. This is an increase from 796 projects and $21.9 million in 1979-80. Educational agencies received over 87 percent of the funding, with 4-year colleges and universities receiving the largest share (39 percent). Noneducational agencies (research centers, private businesses, public agencies, and individuals) received the remaining 12.3 percent of the funding. Although State program improvement projects have focused on every educational level, over 47 percent have been at the postsecondary and combined high school and postsecondary level.

Over 36 percent of the funds were used for curriculum development, resulting in more than 250 separate products. The second largest use of funds (12.6 percent) served special needs students such as the handicapped, gifted, and disadvantaged. Other projects addressed dissemination; career development; evaluation; school, community, industry linkage; teacher education; and sex equity. Other outcomes and products, in addition to curriculum, included 97 training programs and workshops, 94 career and vocational counseling projects, 62 inservice education projects, and 10 placement and employment services projects.

Collectively, the States are supporting research, exemplary programs, and curriculum development at about equal levels, but there is a wide range in project size within and among States. Some States chose to fund no projects in certain categories. The amount obligated for each project also varies considerably. The average funding per project is $27,336 with actual figures ranging from $487 to $466,419. These variations indicate the wide range of strategies chosen by States to achieve program improvement goals.

State Personnel Development

Another activity that is designed to improve programs is State-administered vocational education personnel development. States may use funds to support programs or projects designed to improve the qualifications of those serving or preparing to serve in vocational education programs, including teachers, administrators, supervisors, and vocational guidance and counseling personnel. Although data are not available on the number of personnel trained during a given fiscal year, the potential population for service through these State program improvement and supportive services activities includes over 400,000 vocational education teachers, supervisors, administrators, teacher educators, and other support personnel. (See the preceding section, p. 27 for more information on teachers.)

The National Center for Education Statistics, Vocational Education Data Systems (NCES/VEDS), reported total Federal outlays for preservice and inservice training, under Section 135 of the Vocational Education Act, increased 51.1 percent: from $9 million in 1977-78 to $13.6 million in 1978-79. In school year 1979-80, States spent over $48.2 million ($23.2 million Federal and $25 million State and local funds) on preservice and inservice training. This is a total increase of $2.4 million from 1978-79.

In 1978 there was a State system for personnel development in most States and a vocational education personnel development coordinator in every State and Territory. These coordinators were responsible for encouraging, assisting, and coordinating preservice and inservice personnel development across all occupational areas at all levels. In October of 1981, there were only 19 States with full-time personnel development coordinators. In most other States that function has been assigned to the Research Coordinating Unit (RCU) director or another State administrator. A 1981 survey of the 57 RCU directors, completed by the National Research Coordinating Unit Association, indicated that responsibility for personnel development was a part of the RCU in 31, or 54 percent, of the 57 States and Territories.

During 1980 and 1981, on-site quality reviews of State program improvement and supportive services were conducted in seven States: Arizona, Colorado, Mississippi, Nebraska, Texas, Virginia, and Washington. These quality reviews included the State's personnel development activities. Arizona achieves personnel development coordination through a contract with a major vocational teacher training institution that maintains close liaison with the State's RCU. Mississippi and Texas conduct personnel development activities under the auspices of the RCU. Virginia has a strong, statewide personnel development system, as does Nebraska, both of which are coordinated with the RCU's. The Colorado RCU funds the personnel development in that State. Washington's funds for personnel development are split by full-time equivalent enrollment between secondary school and community college staff. These on-site management evaluation reviews for program quality indicate that essential and effective personnel training is taking place in those States.

Programs of National Significance

Improving the quality of vocational education is not only a State concern, but a major ED concern also. Program improvement is the major purpose of the discretionary Programs of National Significance in Vocational

Education. Under the Secretary's direction, program improvement needs of national importance are addressed through competitively awarded contracts. In fiscal year 1981, $10 million was appropriated for these activities. These funds supported the National Center for Research in Vocational Education, the National Occupational Information Coordinating Committee (discussed on p. 38), and six regional Curriculum Coordination Centers. In addition during 1981, 36 discretionary projects were continued from prior years and 6 new projects were funded.

These projects focused on developing competency measures for vocational skill areas, serving older persons in vocational education, converting military curriculum to civilian use, and many other areas. One noteworthy project focused on Industry-Education-Labor Collaboration which promoted linking the interests and energies of these institutions. Interests common to all three groups include: occupational information; career guidance and counseling; skill development; work and service experience; community economic development and job creation; and concern for the ways all sectors can work together to develop more rewarding learning and work opportunities for all citizens. As a result of this project, many State departments of education have appointed I-E-L coordinators to assist communities in these efforts.

National Center for Research in Vocational Education

The National Center for Research in Vocational Education (NCRVE) provides vocational education research and development which address problems of national significance. It also acts as a clearinghouse, distributes program improvement products and information, and provides information for use in national planning. During fiscal year 1981, the National Center received over 5,600 requests for such information. These functions, and all other National Center undertakings, are directed towards increasing knowledge about vocational education and improving its programs and personnel.

In fiscal year 1981, the Center was supported with approximately $5.5 million in Federal funds. During this fourth year of the Center's contract with the Department, it delivered more than 150 products. For example, a series of three reports was developed based on school transcript and interview data from the 1979 and 1980 National Longitudinal Survey New Youth Cohort. The first report of the series was "Patterns of Participation in Secondary Vocational Education." By using the transcript data, the National Center developed more precise and descriptive curriculum classification measures.

The second report, "Employment Experiences of Students with Varying Participation in Secondary Vocational Education," used the specifications developed in the first report to estimate the effects of high school curriculum on the labor market experiences of youth. The study found that some concentrated involvement in vocational eduction is significantly more likely to be associated with employment in realistic or conventional jobs than is incidental participation or no participation at all. Incidental participation or non-participation in vocational education contributes strongly to being out of the labor force.

The third report is titled, "Postsecondary Experiences of Students with Varying Participation in Secondary Vocational Education." This report states that a majority of high school graduates, both vocational and nonvocational, enroll in some type of postsecondary program. There was no significant pattern that suggested that more intensive vocational preparation was systematically associated with reduced levels of postsecondary attendance.

As another part of its program improvement efforts, the National Center has a Dissemination and Utilization System Product Selection program. During the first 4 years of the contract, the Center systematically screened over 15,737 products developed throughout the country. Of these 15,737 products, 333 were identified and publicized for their potential impact on priority problems, and 25 were selected for nationwide dissemination and use. These selected products have been requested by all States for specific use.

The Center has two other improvement programs which are directed toward individuals' need for professional development. One program, the Advanced Study Center, provided professional growth opportunities for qualified men and women to engage in productive inquiry on a problem of national significance in vocational education. Fellows at the Study Center participated in numerous seminars, conferences, and workshops. The second program is the National Academy's In-residence Program. This program prepared 36 fellows to deal effectively with issues in preparing youth and adults for jobs. The National Academy conducted 80 leadership development programs in 28 States for 2,700 participants.

Curriculum Coordination Centers

The six regional Curriculum Coordination Centers provide a system for sharing development and dissemination of curriculum and instructional materials. Information sharing through dissemination and diffusion, technical assistance, and inservice training are emphasized. In fiscal year 1981, the Centers received approximately $580,000 from the Vocational Education Act to accomplish their goals.

Activities and accomplishments of the six Centers for the period from January 1 - December 31, 1980 included the following:

- Nearly 80,000 communications were sent to States advertising the availability of curriculum information.
- States saved approximately $4 million by adopting or adapting Center-identified materials.
- 765 products were adopted or adapted by States.
- More than over 2,700 information searches were conducted by staff of the Centers

- 14,500 people participated in inservice workshops.
- More than 391,000 items were disseminated to States and over 224,400 people were reached.

STATE AND LOCAL ADMINISTRATION

Expenditures and Uses

Vocational education is administered through a wide variety of State, Territorial, and local agency governance structures, delivery systems, and funding mechanisms. Each State and Territory is virtually unique in its administrative structure. These were the findings of an ED study, National Study of Vocational Education Systems and Facilities, conducted by Institutional Development Associates, Inc., and Westat, Inc. (1978).

To support state-level administration of vocational education programs, States expended a total of $104.9 million ($43.4 million in Federal funds (41 percent) and $61.5 million in State funds (59 percent)) in 1979-80. This is an overall increase of $9.1 million from 1978-79, although the share borne by Federal funds decreased by $800,000. These funds were used for planning, technical assistance, data collection, evaluation, and dissemination activities involved in the States' programs of public vocational education.

For local-level administration, States spent a total of $342.8 million ($9 million in Federal funds (3 percent) and $333.8 million in State and local funds (97 percent)) in 1979-80. This is an overall increase of $80.8 million from 1978-79. Since the expenditures of Federal funds increased by only $600,000, almost all of this increase was State and local funds. Local administration funds were used almost exclusively for salaries of staff who directly administered and supervised local vocational education programs.

School year 1979-80 was the first year in which special planning funds were available for State expenditure under Section 102(d) of the Vocational Education Act. States spent a total of $2.6 million in Federal funds, and although these funds do not need to be matched, States also spent $398,000 of their own funds for these special purposes.

These planning funds were used by a number of States primarily to improve their data collection systems, while other States upgraded their management information systems by obtaining more accurate and complete data on labor supply and demand, target groups, training opportunities, enrollments, and vocational education needs. Some evaluation activities were also supported with these new Federal funds.

State and Local Advisory Councils

State Advisory Councils on Vocational Education (SAVCE's) and Local Advisory Councils on Vocational Education (LACVE's) were established for for the purpose of aiding in the State and local administration of vocational education programs. SACVE's and LACVE's are operating in every State, and their function is to advise State and local education agencies on the operation of vocational education programs.

State advisory councils also are intended to provide assistance by addressing the issues required by law, and by focusing on special needs within their own States. SACVE's are required to assess the effectiveness of vocational education programs, services, and activities. Many councils conducted their own studies, and others reviewed the results of the States' evaluations. The most frequent suggestions made by the councils to increase the effectiveness of vocational education were:

- o Improve vocational education-to-work linkages.
- o Guarantee equal access to men and women.
- o Improve coordination with CETA.
- o Upgrade inservice teacher training.
- o Replace and upgrade equipment.

State advisory councils are also required by the Vocational Education Act to review the distribution of Federal funds within a State according to the annual plan and accountability report. The councils have reported mixed effects of the distribution of the Federal funds. In one State the larger schools benefited because of larger enrollments, and in another State the smaller schools benefited because of reduced ability to pay. In another instance, the set-aside funds for the handicapped and disadvantaged were allocated in such small amounts that local impact was minor and difficult to measure. The councils that reviewed the distribution of Federal funds did find, however, that the distribution procedures were "in compliance" with the law.

A special concern addressed by over half of the State advisory councils focused on the needs of local advisory councils. Two issues were raised frequently. First, SACVE's alleged that LACVE's were not being consulted widely enough when local plans were formed. Second, SACVE's suggested that State administrators provide more support and guidance to LACVE's. While problems with LACVE's may be common, it is noted that there are other local advisory bodies, such as craft committees, which have long been integral parts of the vocational education system.

As required by the Vocational Education Act, States have insured that all agencies providing vocational education have established LACVE's. Many LACVE's have been active in developing local applications, in providing local and regional labor market information, and in updating programs, curriculum, equipment, and facilities. Some LACVE's are providing additional assistance by evaluating current vocational programs and services, by developing placement opportunities for completers, by examining various purchasing arrangements, and by undertaking promotional activities on behalf of vocational education.

OCCUPATIONAL INFORMATION

Another mechansim for improving the planning and administration of vocational education is the National Occupational Information Coordinating Committee (NOICC) and the State counterparts, State Occupational Information Coordinating Committees (SOICC's). In fiscal year 1981, ED contributed $3 million to NOICC and the U.S. Department of Labor contributed $5 million. SOICC's received most of their funding from NOICC, but they also received funds from the State Boards of Vocational Education and CETA.

A major objective of NOICC and SOICC's has been the development and use of an Occupational Information System (OIS) in each State. By the end of fiscal year 1981, 50 States and the District of Columbia had implemented such systems. The OIS's assisted State and local administrators to plan instructional programs that better meet labor market needs. The OIS's also helped teachers, counselors and students determine occupational career goals.

To assist SOICC's in developing statewide Occupational Information Systems, NOICC funded the development of a publication entitled Vocational Preparation and Occupations, (VPO). This publication describes five major occupational classification systems and shows the correlation of data collected under one system against data collected under the other systems. NOICC staff is working with ED staff to develop VPO training materials, and will conduct training sessions on how to use this publication to improve occupational data collection.

NOICC has responded to the mandate to give special attention to the labor market information needs of youth and adults by funding Career Information Delivery Systems (CIDS). CIDS are also the second largest category of SOICC expenditures. By using data from the State's Occupational Information System, CIDS have made occupational and education information available to persons who are making career choices and searching for jobs.

NOICC has also promoted coordination and communication between Federal programs that provide occupational information and training opportunities for target populations. To exchange information with SOICC's and other State and Federal agencies, NOICC disseminated a memorandum series, conducted symposia for Federal officials, and convened special task forces and resource panels. SOICC's also provided information and training to data users to encourage the use of their occupational information.

In fiscal year 1981, as in previous years, NOICC and the State committees brought together widely separated data collecting systems for improved planning of vocational education.

COMPLIANCE AND QUALITY OF STATE VOCATIONAL EDUCATION PROGRAMS

Fiscal year 1981 was the fourth year during which Management Evaluation Reviews for Compliance/Quality (MERC/Q's) were conducted in States that received Federal funds under the Vocational Education Act. Ten States were reviewed during fiscal year 1981 for State activities conducted during the 1979-80 school year:

Illinois	(10/80)	Texas	(4/81)
Arizona	(11/80)	Nebraska	(5/81)
Virginia	(12/80)	Maine	(6/81)
Mississippi	(1/81)	Colorado	(7/81)
Washington	(2/81)	Puerto Rico	(9/81)

These reviews assessed the extent to which States followed their approved operational plans, determined the degree to which their procedures and practices complied with existing laws and relevant regulations, and gauged the quality of these procedures and practices.

The compliance portion of the review focused on fiscal management, personnel and organization, planning, local program evaluation, program purposes, facilities, and advisory councils. Analysis of this portion shows that, for the great majority of the regulations reviewed, the States were in compliance. The most frequent problem areas were the funds distribution procedures, the setaside for students with limited English proficiency, the disadvantaged setaside, and local maintenance of effort. As part of the on-site review, States were provided technical assistance to improve their procedures, as needed.

The compliance portion of the MERC/Q system was computerized in fiscal year 1981, and proved to be a success. The States found the new approach to be helpful in preparing for the on-site review, and the MERC/Q team compiled a wealth of data and generated useful analyses which were previously impracticable. Information on the entire MERC/Q history is now stored in the computer.

The quality portion of the MERC/Q review focused on planning procedures, evaluation and student followup, and program improvement activities. The most common recommendation for all three areas was the need to improve coordination of services among related agencies and to make better use of available data and information so as to enhance program quality.

Although the Management Evaluation Reviews for Compliance/Quality were successful in determining that States were in compliance with the legislation, the reviews did not always provide enough technical assistance to the States to help them improve their procedures. To address the States' increased need for technical assistance, the MERC/Q's have been replaced with a Management Assistance Program (MAP). The MAP will help States identify their need for technical assistance in several administrative and programmatic areas. The major focus of the MAP will be on problem solving, helping States identify present problems in order to improve future performance.

AUDIT RESOLUTION

In general, most States used their Federal Vocational Education Act allocations according to the requirements of that law. When problems were identified, they were usually corrected before the Office of Vocational and Adult Education received the final audit report. Only 14 audit reports involving 13 States were received in 1981. Five of these audit reports did not involve the possible return of any funds to the Federal government. In the remaining nine reports, auditors questioned the use of Federal monies totaling $22 million. The Office of Vocational and Adult Education concurred in findings that totaled $5.7 million. Ten of the audits were resolved during 1981 and four were being held pending completion of the review process or awaiting a response from the State agency involved.

A common finding in several audits was the failure to properly use funds within the carryover period as required by the Tydings Amendment. Two States have appealed their audit reports to the Education Appeal Board. One State has requested partial recovery (reinstatement) of the funds they returned as permitted by Part E of the General Education Provisions Act (GEPA).

II IMPACT OF VOCATIONAL EDUCATION ON NATIONAL NEEDS

Two national problems receiving maximum attention from the Administration are (1) revitalizing the Nation's economy and (2) improving defense preparedness. Another more recent initiative involves the economic restoration of inner cities through designation of special "enterprise zones." Although the methods proposed for addressing these national needs emphasize budgetary or tax-incentive initiatives, vocational educators are acting on the premise that skilled workforce development will prove to be a crucial weapon in any successful, long-term response to these and other national needs.

While there are many public and private mechanisms for conducting skilled workforce development, the public vocational education system is a most significant resource. This public system contains 19,071 institutions offering specialized vocational instruction, such as vocational high schools, area vocational centers, comprehensive high schools, 2-year technical institutes and community colleges, and non-collegiate postsecondary institutions. This publicly funded system represents a capital investment of many billions of dollars in facilities and equipment, and an aggregate annual operating budget of $6.8 billion (only one-tenth of which was Federal Vocational Education Act money during the 1979-80 school year).

State vocational education systems are currently offering programs addressing national needs. Much of this movement has occurred during school year 1980-81, a year during which support for vocational education increased only marginally. In some States, State and local financial support decreased. According to informal reports, such States have been able to address major national needs by diverting funds from other programs, delaying plant and equipment modernization, tightening administrative structures, and collaborating more effectively with private business and industry.

Comprehensive national data on vocational education projects that specifically address national needs are not available through the Vocational Education Data System (VEDS) in any form that relates directly to these needs. Studies that might fill this data gap were only in the discussion stage this past year. Nevertheless, no report of vocational education's accomplishments during the 1980-81 school year would be complete without some concrete examples of vocational education's response to national needs. While not definitive, the following examples may serve to indicate vocational education's potential for the future.

ECONOMIC REVITALIZATION

The National Need

The Nation's economy no longer enjoys the overall dominant position, in either domestic or world markets, that it did during the three decades following World War II. There are multiple causes for our falling productivity rate, which now lags behind that of all but a few of the world's industrialized countries.

Skilled workforce development is one method to increase productivity for economic revitalization. While the private sector carries the major responsibility for skilled workforce development, most firms cannot meet this responsibility -- and remain economically competitive -- without using the services of publicly funded vocational education. Vocational education trains new entry-level employees and retrains existing employees whose skills need updating. Other support services such as curriculum development and even trainee recruitment are also supplied by vocational education institutions.

In 1981 the National Center for Research in Vocational Education at the Ohio State University conducted a survey of 2,000 National Association of Manufacturers member firms. Over 50 percent of the respondents indicated that their company benefited from vocational education. Almost 40 percent felt that vocational education lowered their company's training costs; and 60 percent said that vocational education graduates needed less training than other new employees in similar positions. Eighty-five percent preferred hiring vocational graduates for jobs requiring less than a baccalaureate degree. It should be noted that these percentages would probably be higher if only those firms having had joint-program experience with vocational education were counted. Those companies currently involved in such joint efforts with vocational education graded its effectiveness more highly than those that had no such experience.

Vocational Education's Response

Vocational education contributes to economic revitalization by graduating a consistent flow of skilled, entry-level workers from its regular secondary and postsecondary "day school" programs. In addition, several other programs focus on adult training or retraining, and offer flexible solutions to the difficult problems characteristic of an economy in transition.

One type of vocational education program that serves economic revitalization retrains unemployed workers for new occupations. For example, when United States Steel Corporation phased out its mill in Waukegan, Illinois, the last workers to be laid off in October 1980 were senior craftspeople and skilled office workers with 18-30 years experience. Fifty-one of these workers attended courses at the Lake County Area Vocational Center. Nine more attended the Lake County Community College. Trainees at both institutions studied skills for which there was a proven demand: air conditioning, refrigeration and heating, small engine repair and others. Completers received either an associate degree or a special certificate of completion. By the end of 1981, most of the trainees had been placed in jobs in a new career field.

Another problem situation that vocational education can help solve is occurring in States where the secondary school enrollment is shrinking and some type of statutory tax limitation has been adopted. Many skilled teachers, particularly those at the elementary school level, must be released. The Commonwealth of Massachusetts is a prime example. However during 1981, the Massachusetts regional community college system began what has proved to be a spectacularly successful program. Released teachers were retrained as computer programmers and analysts through special vocational programs at the community colleges, and are now in a solid career field which has worker shortages throughout the Nation.

Another type of program to which vocational education contributes is apprenticeship training. This program is particularly important in fields such as the machine tools trades, where training is lengthy, companies are typically small, and the shortage of skilled workers is especially severe. A recent study by a group of industry associations places this worker shortage at 250,000 machinists during the next 5 years. A current example of apprenticeship training involves the Livingston-Wilbur corporation in Fanwood, New Jersey, a small firm which employs 45 workers. After unsuccessfully conducting a high-powered radio and newspaper recruitment campaign for skilled workers, the company solved its problem through a joint apprenticeship program with the area vocational center.

One of the more dramatic economic revitalization services provided by vocational education is the offering of customized, "quick-start" training for business and industry new to an area. According to a recently conducted survey, 21 States reported that their vocational education institutions had trained more than 100,000 persons in such "quick-start" programs during the 1980-81 school year. While data on the movement of existing industry from one State to another is largely lacking, it should be noted that the availability of a skilled workforce may enable new firms to be created in a State. This is important for economic revitalization, since new, small firms supply the majority of job openings in most industries.

South Carolina has an impressive record of attracting new firms through its modern system of "Technical Education Colleges." Significantly, South Carolina also reports that the customized training programs created at these institutions helped persuade scores of overseas firms to open branch offices and plants in the State. Many other States have made similar gains. Customized training has thus helped achieve a net gain in jobs nationally, rather than merely causing jobs to be switched from one State or community to another.

One of the better examples of the impact of customized training is Illinois' High Impact Training Services (HITS) program. This program not only meets specific training needs of new businesses and industrial firms locating in Illinois, but it also meets the needs of established firms that are expanding or making significant changes because of the introduction of new materials, product lines, equipment, and processes. The HITS program is coordinated through the Illinois State Board of Education in consortium with the Illinois Department of Commerce and Community Affairs, the Illinois State Chamber of Commerce, local educational agencies, community groups, and employers.

In fiscal year 1981, the Illiois State Board negotiated funding agreements with 15 community colleges, 2 area vocational education centers, and 3 local school districts. These schools provided 26 short-term training programs that helped 1,159 persons become employed. Based on the Illinois State Chamber of Commerce's own analysis, "What 100 Extra Jobs Mean to a Community," the employment of HITS trainees is projected to have produced the following aggregate benefits for the host communities, the State, and the Nation:

Additional households in communities	1,115
Additional residents in communities	4,067
Other persons employed in communities	788
Projected increases in revenues (FY 1982)	
Personal income	$ 24,703,460
Bank deposits	11,432,500
Retail sales	15,145,394
Property taxes (7%)	973,023
Local sales taxes (1%)	151,454
State sales taxes (4%)	605,815
Federal income taxes (13+%)	3,211,437
State income taxes (2.5%)	617,584
	$ 56,840,667

The fiscal year 1981 investment made by the Illinois State Board of Education to achieve these benefits was $740,385, or an average of $638.81 per person. This added investment was only necessary to cover instructional costs, since facilities and equipment were already in place in existing vocational education institutions. Further, these results measure neither benefits accruing to employees nor the consequences of avoiding welfare payments for at least some of the trainees. However, these results emphasize that economic revitalization affects not only the private sector, but communities, local governments, and the State as well.

Because of the national focus on economic revitalization, the Assistant Secretary for Vocational and Adult Education appointed a task force in 1981 to explore and create new ties between education and the private sector to improve skilled workforce development. Two of the task force goals are to provide the private sector with greater operational responsibility for programs, and to promote increased financial support for vocational education from private sources. New mechanisms which include the private sector in managing training programs, such as public-private corporations, can have a great impact on economic revitalization by rebuilding inner cities and reaching more prospective trainees. In addition, planning began in 1981 to create an independent national council to address task force goals. Subsequently, regional and city councils will evolve to continue this effort toward economic revitalization.

Another initiative of the Office of Vocational and Adult Education during 1981 was a study funded under contract with the American Vocational Association entitled Vocational Education for Economic Development. The major study product, "Vocational Educators' Handbook for Economic Development," has been widely distributed. This handbook outlines workable techniques that many States have used to help achieve effective economic development programs through skilled workforce development, and includes case studies of model sites across the Nation where such techniques have been successfully implemented.

DEFENSE PREPAREDNESS

The National Need

Because of the predominant consensus that the Nation's defense preparedness posture has been allowed to deteriorate over the past decade, this Administration has developed plans to expend approximately $1.5 trillion during the next 5 years to correct this weakness. There are two parts of this multi-dimensioned effort that involve skill training: first, insuring a sufficient number of civilian workers to build the necessary systems; and, second, insuring a steady supply of skilled military personnel to operate, maintain, and repair these systems.

Regarding a skilled civilian workforce, the need is a specialized segment of the overall need for skilled workers required for economic revitalization. According to recent projections by the Department of Defense, there will be a need for 10 million new workers within the next 5 years in 41 occupational fields that (a) span both defense and non-defense industries, and (b) require vocational training. This same study attempted to isolate that part of the need directly related to defense production. For example, total employment for electrical and electronic technicians is projected as rising from 204,440 in 1982 to 241,190 in 1987, or an annual increase of 3 percent without counting replacement needs. At the same time, as part of this total increase, the job openings for these technicians in defense-related industries are expected to rise from 50,770 in 1982 to 60,710 in 1987, or an annual increase of almost 4 percent again without counting replacements. In many key occupations (e.g., machinists), the annual growth rate in defense-related industries is expected to be twice that in all industries.

While it is hoped that the private sector will cover the many expected shortfalls in skilled workers for the defense industrial base, both the Defense Science Board of the Department of Defense and the House Armed Services Committee conclude that severe problems will be encountered, particularly by secondary and tertiary sub-contractors. If this occurs, inflation will be refueled as competition for skilled workers drives up labor costs; and, still more companies will be forced to import foreign workers.

Regarding skilled military personnel, the need results from the still-rapid loss of highly skilled technicians to high-bidding civilian firms (e.g., in the computer and nuclear energy fields). This loss means that skilled replacements must be rapidly trained, thus placing great pressure on the armed services' excellent training facilities for service jobs that have counterpart occupations in the civilian sector.

Vocational Education's Response

Typical of vocational education's response to specific needs are the following:

- The Mississippi Department of Education last year concluded its 10th year of training skilled craftworkers, welders, and shipfitters for the Ingalls Shipbuilding Corporation in

Pascagoula, Mississippi. Twenty full-time instructors work at the shipbuilder's site to train company employees.

- Using privately donated equipment and combined public-private instructional staffs, six vocational high schools in the Sunnyvale, California area established special programs to train computer and electronics technicians for the Lockheed Missiles and Space Company.

- Last year, the Secretary of Education's Region I Award for Excellence was presented to the Maine Bureau of Vocational Education for its "Pratt & Whitney Industrial Training Project." This project, ending in June 1981, trained 708 Pratt & Whitney Aircraft Group employees in the operation of production grinding machines, milling machines, horizontal lathes, and vertical turret lathes. In offering more than 118,000 training hours, State technical institute instructional staff were used exclusively; and the State of Maine contributed $330,000, as well as $50,000 of Vocational Education Act monies at its disposal. Employees and management have been well satisfied with the quality of training and retention and productivity have been excellent. The company has an $18 million local payroll and preferentially uses local suppliers for $35 million of orders annually.

Regarding the skill training of personnel in the military services, one of the more outstanding examples is a $13 million contract between the United States Navy and a consortium of four postsecondary technical institutions: Lake County Community College, Great Lakes, Illinois; Meridian Junior College, Meridian, Mississippi; San Diego Community College, San Diego, California; and, the State Technical Institute, Memphis, Tennessee. All programs train active-duty naval air technicians. The largest program, budgeted in 1981 for $7 million, is located at the State Technical Institute at Memphis. In 1981, this program trained: 15,000 in the fundamentals of aviation mechanics; 9,000 in basic electricity and electronics; nearly 1,700 aircraft technicians; 1,135 jet test mechanics; and 850 air traffic controllers.

Because of the critical nature of defense preparedness, the Assistant Secretary for Vocational and Adult Education, during 1981, appointed a task force to work with the Department of Defense and other Federal agencies to determine needs for skilled workforce development; and to develop mechanisms for focusing vocational education's proven capabilities on this task. A program handbook for local directors of vocational education is being developed and a national advisory panel of private industrialists is being formed.

HIGH TECHNOLOGY

The National Need

Underlying both the need for economic revitalization and the need to augment defense preparedness are the rapid advances in various technologies and the emergence of completely new technologies. The ultimate solution to the Nation's low productivity may be to move industrial investment into high-technology fields such as telecommunications, microprocessors, robotics, biotechnology, and synthetic materials, among others. This implies not only major expenditures in new machines and processes, but also a parallel commitment to training the highly skilled workers needed to operate and repair this equipment.

A recent study by the National Center for Research in Vocational Education at the Ohio State University points out, "The development and production phase of the advanced technologies is outstripping the availability of a trained workforce to operate and maintain them. One example of this skill-shortage dilemma is the rapidly growing area of robotics, in which there is a shortage of trained technicians capable of monitoring and servicing the expanding array of industrial robots (Stauffer 1981). Shortages of trained technicians are also appearing in the use of computer graphic technologies, biomedical engineering technologies, and electro-optical equipment."

Vocational Education's Response

Many vocational schools and technical community colleges have established high technology programs, including the following:

- North Lake College in Irving, Texas, offers an associate degree program in precision optics fabrication. Students who are either employees of Texas Instruments or selected by that firm learn how to fabricate lenses for a forward-looking infrared (FLIR) system used in weapons guidance, tank fire control, and airborne targeting. Upon successful completion of the first academic period of 10 weeks, students are automatically promoted by the firm to Job Grade 7 and assigned to a shift at the firm's plant for on-the-job training, receiving evening instruction at North Lake College. Students require approximately 2.5 years to complete the program, achieving a skill level equal to that normally acquired after 4 to 7 years of on-the-job training. Equipment now on loan to North Lake College will eventually be donated; and skilled workers trained through this arrangement are judged by Texas Instruments as being superior to those trained by other means.

- Macomb County Community College in Detroit, Michigan, offers its students three different curricula in robotics, ranging from automation welding to a complete sequence of basic electronics, hydraulics, pneumatics, controls, circuitry, automatic lubrication systems, and mechnical drives and linkages. Students at the school learn to install, program, and maintain an Auto-Place robot, a Seiko robot, and the more sophisticated Unimate 2000 robot; and gain further hands-on experience at four local robotics firms. The first class graduated in 1981, but 400 potential students had to be turned away after the program was filled.

Looking toward the future, the Assistant Secretary for Vocational and Adult Education has created a High Technology working group to involve the private sector in gearing up vocational institutions for these new programs. In addition, a contract was let during 1981 to Conserva, Incorporated, to assess all high technology developments and relate them to existing vocational and technical education programs that will need new instructional components.

INNER-CITY INITIATIVES

The National Need

On March 23, 1982 the President transmitted his "Enterprise Zone Tax Act of 1982" to the Congress. While also encompassing depressed rural areas, this Act recognizes the special economic problems faced by the Nation's inner-city cores. During the past two decades, business and industry have increasingly moved to the suburbs; property and services have been deteriorating; and concentrations of the unemployed, minorities, and the unskilled have been building. As has been demonstrated by numerous studies, these three types of concentration largely overlap each other. While the proposed legislation emphasizes various tax incentives, the President's announcement includes the recommendation that both States and localities might supplement these incentives with their own initiatives in areas such as job training.

Vocational Education's Response

Until the mid-seventies, the record shows that modern vocational education largely followed the same path to the suburbs as expanding business and industry. While this trend has not been entirely reversed, there are recent instances throughout the Nation where both States and localities have already acted to provide the benefits of quality vocational education to inner-city districts; districts that typically are burdened by obsolete facilities. In both of the following examples, it is worth noting that the new facilities and their acceptance could not have been achieved without the intimate involvement and support of both the private sector and community organizations.

- The City of Detroit and the State of Michigan are completing a system of five citywide vocational-technical education centers, each offering its own training cluster. One center opened in 1980 and two will not enroll students until the fall of 1982; however, the remaining two began operations during 1981: the Breithaupt Center, featuring food technology, auto mechanics, electricity and electronics, and appliance repair; and, the Randolph Center, featuring the construction trades, business education, and computer electronics. The total investment in all five centers is estimated at $55 million, of which $27 million will be Federal Vocational Education Act funds. During 1981, total enrollment reached 2,942 students, most of whom are from minority groups. According to State officials, local firms were extensively used in developing curricula and center designs; and, acceptance by these employers and community groups of center output has been almost unanimous.

- The City of Boston and the Commonwealth of Massachusetts chose a somewhat different approach than Detroit in solving the City's long-standing problems in the area of skill training. Prior to 1980, Boston's system consisted of quality cooperative programs operated out of high schools at the city's outer reaches; however, the inner city (especially Roxbury, the black community) was served by a rapidly deteriorating trade school orginally built in the early 1900's. A cooperative effort was mounted by the Boston public schools and the State Department of Education, abetted by a "Tri-Lateral Council" initiated by the city's business and financial institutions and by community-parent advisory councils. This effort culminated in a $38 million "occupational resource center" serving two "shifts" per day of 1,800 students each, from 18 sending high schools, as well as adults. The center is located in the heart of Roxbury, 65 percent of its students are minority youth, and 21 percent are handicapped. The Tri-Lateral Council, organized labor, and community groups continue to provide strong consultative services for the center's programs. For example, Digital Equipment Corporation of Maynard, Masssachusetts, loaned a top computer specialist to the center, who has developed its entire computer technology program. However, no Federal Vocational Education Act funds were used for construction or equipment and the State reimbursed the City for 75 percent of its expenditures. It is also important to note that non-public school students make up a significant part of the center's enrollment.

Because of the need to involve vocational education more forcefully in efforts to aid inner cities, the Office of Vocational and Adult Education negotiated a contract late in 1981 with the National Academy of Sciences' National Research Council to investigate these needs (as well as those in depressed rural areas) and to recommend how vocational education might best answer them. This 18-month study will focus on private redevelopment of "enterprise zones" and on unemployed minority youth in those zones. Responsibility for the study will rest with a 14-member Committee on Vocational Education and Ecmonic Development in Depressed Areas composed of nationally prominent business, industry, and education leaders.

RURAL INITIATIVES

The National Need

To an increasing degree, the problems of densely populated urban areas have overshadowed those of rural areas. However, rural and small communities across this Nation not only are unique and varied, but perform indispensable functions--especially in agriculture. The schools in these localities reflect diversity and, typically, have both knowledge of and concern for the needs of individual students and families. Teachers and administrators are active community members, and parents and community leaders are involved in the operation and activities of the schools. Yet, by their very nature, these schools have problems as well as strengths. Geographic isolation, severely limited financial resources, and Federal/State requirements confront many rural and small schools where there are limited educational and skill training options.

Vocational Education's Response

During 1981, the Rural Initiatives Task Force of the Office of Vocational and Adult Education completed its work, publishing and distributing the resource document, Rural Education Programs That Work: Sharing Ideas. Through this publication, the Education Department intends to simplify the task of acquiring technical assistance in rural programs, whether from Federal, State, or local sources. The following programs are typical of exemplary efforts identified in 31 States:

- The School for Practical Nursing in Pineville, Kentucky, in the foothills of the Appalachian Mountains, was created in response to an identified need for practical nurses in an area of high unemployment. This full-time 12-month program (including supervised clinical experience) emphasizes service to students with special needs. Educationally disadvantaged students are referred to a learning center for remedial work prior to admission.
- The State of Utah, Office of Vocational Education, has developed an "integrated shop program," combining the areas of trade and industrial education, agricultural mechanics, and industrial arts. The objectives include providing more adequate curricular offerings for small high schools by pilot projects in a few schools having these characteristics. Selected schools are also assisted by the State vocational education staff in adapting and improving school facilities to accommodate these special programs. Without this kind of integrated approach and assistance, these schools would be hard-pressed to go beyond basic industrial arts, which is not an entry-level occupational preparatory program.

Also during 1981, the Secretary took preliminary steps to form an Intra-Agency Committee on Rural Education, giving the lead role to the Assistant Secretary for Vocational and Adult Education. This committee, whose work will be described in next year's report, consists of representatives from all 14 units within the Department of Education and will provide the vehicle for a major departmental focus on rural education, as well as the mechanism for performing liaison with other Federal agencies having similar concerns.

AGRICULTURE

The National Need

Agricultural production is one area in which the United States has both a clear technological lead over the rest of the world and a significantly higher productivity rate. This production, particularly in grains, contributes $40 billion annually to the plus side of the Nation's balance of payments. Yet, this high productivity is not without costs: tillable land is rapidly being diminished through conversion to other economic development uses; topsoil is being eroded at an alarming rate; deep water resources are being depleted; and chemical and animal-waste pollution poses serious problems. These developments, together with a continuing decrease in the number of farmers (if not in "combined" fields such as agri-business and agri-mechanics), demand that future farmers be afforded a wide range of skills in highly sophisticated technologies such as are involved in the operation, maintenance, and repair of computer-based farm equipment and management; and in entirely new agricultural technologies such as hydroponics. As John Block, Secretary of Agriculture, has pointed out, the effective use of these technologies cannot be accomplished through government regulation and heavy penalties, but will depend on the abilities of individual farmers to adapt.

Vocational Education's Response

Vocational agriculture is the oldest branch of vocational education; and yet, one of the most active and modern. For example, during the early 1970's the U.S. Office of Education funded a number of curriculum development projects in emerging technologies, among them being that for "electro-mechanical technician." Although not meant specifically for use by agricultural technicians, it is the opinion of specialists in the Office of Vocational and Adult Education that some of the best instruction for potential technicians of this type is offered within vocational agriculture programs. Since exemplary programs exist in all 50 States, it may be more useful to report on two special aspects of all these programs that are basic to their quality, technical scope, and responsiveness:

- No other program has developed a student organization more widespread or effectively integrated with its instructional program than has vocational agriculture. The Future Farmers of America has chapters in all 50 States and one Territory. FFA membership increased to 565,611 during the 1980-81 school year: 482,611 at the secondary-school level (8,236 chapters); and 83,000 at the postsecondary-school level (340 chapters). The vitality of the organization is demonstrated by the fact that the postsecondary segment has only been in existence since 1979. In addition, vocational agriculture features a Young Farmer Program that instructs working farmers and their spouses in the latest technological developments and in other areas that will improve their productivity and lives.

- A collaboration of local, State, and Federal agricultural education specialists, aided by the Iowa State University, has been working since 1976 on the development of national standards for all branches of and activities in the field. Various modification and validation activities continued during 1981; and will extend indefinitely into the future as new technological elements must be inserted. This project has not only provided a model for continuous program modernization but is an excellent example of how Federal staff can provide support to States and localities in national activities which they initiate; and how this can be accomplished without intrusiveness.

Because of the vital nature of agriculture in the Nation's economy and the need for effective training in new technologies, the Assistant Secretary for Vocational and Adult Education, last fall, developed a plan for expanded services to the States which will be implemented later this year, to the extent that resources permit.

DOMESTIC ENERGY AND MINERAL PRODUCTION

The National Need

The problem of energy and non-renewable mineral resources has critical significance for both economic revitalization and defense preparedness. There are two aspects of this problem: adequate supply, and cost. In the short term, the decreased consumption of foreign oil, plus increased domestic drilling by American firms, has increased the Nation's self-sufficiency--a major goal of this Administration. However, the outflow of American cash to OPEC nations will still be a staggering $60-80 billion during 1982; and, according to a recent announcement by the President, the acquisition of strategic minerals for defense industries represents a major challenge. While the emphasis, for the present, is on fossil fuel sources of energy, most studies see the ultimate solution as a mix of all sources: fossil, nuclear, solar, and synthetic. On this assumption, and given the goal of national self-sufficiency for a rapidly expanding economy, it has been projected that an additional 72,000 jobs directly related to energy production will be created by 1990, a large proportion of which will be in the skilled crafts for which vocational education can conduct training.

Vocational Education's Response

Vocational education's response to the Nation's energy problems has been conditioned by the emphasis that the 1976 Amendments placed on solar applications and coal technology, both at the postsecondary level. For example, of the 10 energy programs nominated for the Secretary's Award for Excellence, seven involved solar energy techniques; however, one focused on liquified petroleum gas technology and the remaining two combined a variety of energy applications as they affected traditional vocational education programs in the building trades and heating-air conditioning, among others. The following examples suggest that the response has occurred in still other directions and in close collaboration with the private sector:

- At the request of the Kansas Independent Oil and Gas Association, three Kansas community colleges jointly implemented a multi-campus pilot training program for rigbuilder helpers, rotary drill helpers, roustabouts, and pumpers. The program uses inservice learning strategies involving industry-produced audio-visual materials and community college instructional staff.

- The Colorado Coordinating Council for Mine Training was established in 1980 and fully operational during 1981. The membership includes representatives from the postsecondary schools active in coal and oil-shale miner training, State agencies concerned with manpower supply and mine safety and health, and the mining industry. Industry input into the council is supplemented through the various training committees of the mine operators' associations.

Planning and program funding was provided to four postsecondary institutions offering pre-employment upgrading, skill training, and legislated mine safety and health instruction.

ENTREPRENEURSHIP

The National Need

In this age of giant corporations, the importance of small businesses and entrepreneurs is easily overlooked. However, firms with less than 100 employees provide approximately 75 percent of new job openings, as well as roughly the same proportion of technological innovations. There are 14 million small business owners in the Nation and 500,000 new small firms begin operations each year. The success or failure of these small firms impact on each of the national needs and responses already described. According to a recent study by the Small Business Administration, bankruptcies of small businesses increased by 32 percent between 1980 and 1981, and total business failures for this type of firm grew by 42 percent during the same period. Findings of the 1980 White House Conference on Small Business state that 80 percent of all small businesses fail within the first 5 years of operation; and that nine out of ten small businesses fail because of poor management. Specific reasons include: lack of planning, inadequate controls, poor accounting methods, inability to read and understand financial statements, and inability to locate expert advice when needed. These facts, implying high personal and financial costs to individuals and the economy, strongly suggest that training in small-business management skills must be made more generally available to entrepreneurs, and to prospective entrepreneurs, throughout the Nation.

Vocational Education's Response

Elements of entrepreneurship education have always been present in vocational education programs; however, entrepreneurship as a distinct field for instruction has developed over the past few years. Many of the newer type of programs are now offered throughout vocational education, both for school-age youth and older adults. The "foundation" program in the Montgomery County, Maryland Public Schools not only provides an impressive example of entrepreneurship instruction, but also illustrates a creative mechanism for collaborating with the private sector.

In the Montgomery County program, students actually "practice" entrepreneurship while learning their chosen crafts. The mechanism consists of nonprofit foundations whose memberships are drawn from business, professional, and school communities concerned with specific occupational fields. These foundations make possible the operation of "mini-businesses" by students, thus providing hands-on entrepreneurial experience rather than just classroom instruction in these skills--valuable as this instruction may be. For example, under the Construction Trades Foundation, Montgomery County students have built and sold four homes during the last 4 years. In this process, the students have worked with business people on all aspects of the project from architectural drawings, construction, and interior and exterior design to sales and marketing. As a second example, students have a bona fide franchise, under the Mini-Auto Dealership Foundation, to recondition, repair, and sell used cars. The foundation must contend with the same rules and regulations as any other local dealership. After gaining this kind of entrepreneurial experience, the participating students enter the automotive business with a clear-cut advantage over students who lack this experience and have not had the opportunity to learn business development and management techniques from successful businessmen and professionals.

In September 1981, the Assistant Secretary for Vocational and Adult Education assembled a new in-house Task Force on Entrepreneurship Education (TFEE) with the mission of assuming leadership and responsibility for providing clear direction at the national level and for promoting and expanding entrepreneurship education and training as an integral part of vocational and adult education. The mission focuses particular concern on orientation and exploratory experiences for young people, preparation of potential business owners, and developing and upgrading survival skills of business owners. TFEE has the overall goal of infusing entrepreneurship education and training in all vocational and adult education programs, and eventually in all of education. The general objectives of TFEE include establishing an ED clearinghouse, disseminating information about relevant successful and replicable programs and delivery models, and coordinating Department of Education efforts with relevant programs in other Federal agencies and with the private sector.

APPENDIXES

APPENDIX 1. FUNDING TABLES 1979-80

F-1. Expenditures by State (sum of Sections 120, 130, 140, and 150)

F-2. Outlays for Section 110, FY 1979 and FY 1980

F-3. Outlays for handicapped under Section 110 by State

F-4. Outlays for disadvantaged under Section 110 by State

F-5. Outlays for LEP under Section 110 by State

F-6. Outlays for adult and postsecondary under Section 110 by State

F-7. Outlays for Section 120 by year and program

F-8. Expenditures for Section 120 by State

F-9. Outlays for Section 130 by year and program

F-10. Expenditures for Section 130 by State

F-11. Outlays for Section 140 by year and program

F-12. Expenditures for Section 140 by State

F-13. Outlays for Section 150 by year and program

F-14. Expenditures for Section 150 by State

F-15. Expenditures for Section 102 by State

F-16. Direct instructional costs for vocational education by source of funds by program

F-17. Direct instructional costs for vocational education by source of funds by State

TABLE F-1 VOCATIONAL EDUCATION (VEA) EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80
(SUM OF SECTIONS 102(D), 120, 130, 140, AND 150)
(INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

STATE OR OUTLYING AREA	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	85,364	72,526	12,838	84,820	72,526	12,293	545	0	545
ALASKA	11,947	10,683	1,264	11,263	10,683	580	684	0	684
ARIZONA	46,691	39,498	7,193	46,691	39,498	7,193	0	0	0
ARKANSAS	41,635	35,606	6,030	41,635	35,606	6,030	0	0	0
CALIFORNIA	814,936	763,716	51,221	814,936	763,716	51,221	0	0	0
COLORADO	84,058	76,195	7,862	84,058	76,195	7,862	0	0	0
CONNECTICUT	67,324	59,868	7,456	66,554	59,868	6,686	771	0	771
DELAWARE	20,863	19,249	1,613	20,863	19,249	1,613	0	0	0
DISTRICT OF COLUMBIA	5,824	4,224	1,600	5,730	4,224	1,506	93	0	93
FLORIDA	447,723	407,535	40,188	432,036	407,535	24,501	15,686	0	15,686
GEORGIA	131,260	111,188	20,072	128,906	111,188	17,718	2,354	0	2,354
HAWAII	16,083	13,480	2,603	16,083	13,480	2,603	0	0	0
IDAHO	18,263	15,447	2,816	18,263	15,447	2,816	0	0	0
ILLINOIS	384,192	344,235	39,957	376,816	344,235	32,582	7,375	0	7,375
INDIANA	92,234	76,359	15,875	92,234	76,359	15,875	0	0	0
IOWA	77,514	69,087	8,427	77,514	69,087	8,427	0	0	0
KANSAS	46,758	40,704	6,054	46,758	40,704	6,054	0	0	0
KENTUCKY	98,171	86,604	11,567	97,670	86,604	11,066	501	0	501
LOUISIANA	100,670	87,315	13,355	100,670	87,315	13,355	0	0	0
MAINE	24,113	21,398	2,715	24,113	21,398	2,715	0	0	0
MARYLAND	129,757	117,320	12,437	128,419	117,320	11,099	1,338	0	1,338
MASSACHUSETTS	260,684	235,440	25,244	249,121	235,440	13,681	11,563	0	11,563
MICHIGAN	254,332	214,480	39,852	245,266	214,480	30,786	9,066	0	9,066
MINNESOTA	120,367	106,972	13,395	120,344	106,972	13,371	23	0	23
MISSISSIPPI	54,575	46,551	8,024	54,575	46,551	8,024	0	0	0
MISSOURI	95,616	81,868	13,748	95,616	81,868	13,748	0	0	0
MONTANA	23,970	20,347	3,624	23,177	20,347	2,830	794	0	794
NEBRASKA	25,080	20,240	4,839	25,080	20,240	4,839	0	0	0
NEVADA	12,104	10,777	1,327	12,104	10,777	1,327	0	0	0
NEW HAMPSHIRE	13,206	10,291	2,915	12,558	10,291	2,267	648	0	648
NEW JERSEY	173,277	155,965	17,312	173,277	155,965	17,312	0	0	0
NEW MEXICO	31,861	24,674	7,188	29,452	24,674	4,778	2,409	0	2,409
NEW YORK	610,018	554,169	55,849	610,018	554,169	55,849	0	0	0
NORTH CAROLINA	208,153	190,368	17,785	208,153	190,368	17,785	0	0	0
NORTH DAKOTA	16,470	14,371	2,099	16,470	14,371	2,099	0	0	0
OHIO	394,355	358,877	35,478	390,885	358,877	32,007	3,470	0	3,470
OKLAHOMA	90,676	81,028	9,647	89,941	81,028	8,912	735	0	735
OREGON	70,958	62,404	8,554	69,209	62,404	6,805	1,749	0	1,749
PENNSYLVANIA	360,883	314,960	45,922	350,961	314,960	36,001	9,921	0	9,921

TABLE F-1

RHODE ISLAND	28,423	25,447	2,975	28,273	25,447	2,826	149	0	149
SOUTH CAROLINA	109,890	99,099	10,791	109,890	99,099	10,791	0	0	0
SOUTH DAKOTA	11,585	9,466	2,118	11,585	9,466	2,118	0	0	0
TENNESSEE	121,845	108,463	13,381	121,845	108,463	13,381	0	0	0
TEXAS	377,752	325,433	52,318	358,446	325,433	33,013	19,305	0	19,305
UTAH	46,948	42,033	4,914	46,948	42,033	4,914	0	0	0
VERMONT	11,371	9,787	1,584	11,371	9,787	1,584	0	0	0
VIRGINIA	154,977	139,011	15,966	154,977	139,011	15,966	0	0	0
WASHINGTON	200,248	185,930	14,318	192,492	185,930	6,562	7,757	0	7,757
WEST VIRGINIA	57,945	52,406	5,539	57,751	52,406	5,345	194	0	194
WISCONSIN	180,375	156,717	23,658	170,824	156,717	14,107	9,550	0	9,550
WYOMING	6,504	5,150	1,353	6,273	5,150	1,123	231	0	231
TOTAL U.S.	$6,869,828	$6,134,961	$734,860	$6,762,914	$6,134,961	$627,946	$106,911	$0	106911

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-2 OUTLAYS FOR VOCATIONAL EDUCATION (VEA) SECTION 110 PROGRAMS, BY AUTHORIZATION YEAR AND SOURCE OF FUNDS, AND BY PROGRAM: SCHOOL YEAR 1979-80

PROGRAM	FISCAL YEAR 1979			FISCAL YEAR 1978		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
HANDICAPPED	161,397,347	118,861,654	42,535,693	33,860,722	13,333,292	20,527,430
DISADVANTAGED	405,336,889	331,393,739	73,943,150	69,092,888	33,288,123	35,804,765
LIMITED ENGLISH PROFICIENCY	23,648,782	19,821,265	3,827,517	1,848,501	512,226	1,336,275
ADULT AND POSTSECONDARY	2,587,613,280	2,472,473,115	115,140,165	181,484,257	158,501,820	22,982,437
SECTION TOTAL	$3,177,996,298	$2,942,549,773	$235,446,525	$286,286,368	$205,635,461	$80,650,907

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-3 OUTLAYS FOR PROGRAMS FOR HANDICAPPED ENROLLEES UNDER SECTION 110 (INCLUDING CARRYOVER)
BY SOURCE OF FUNDS, PERCENT, RATIO, AND BY STATE
UNITED STATES, OUTLYING AREAS SCHOOL YEAR 1979-80

STATE OR OUTLYING AREA	----------OUTLAYS---------- TOTAL	NON-FEDERAL	FEDERAL	FEDERAL AS PERCENT OF TOTAL	RATIO OF NON-FEDERAL TO FEDERAL
ALABAMA	2,271,996	1,161,182	1,110,814	48.9	1.05
ALASKA	473,031	391,139	81,892	17.3	4.78
ARIZONA	1,934,844	1,281,324	653,520	33.8	1.96
ARKANSAS	1,908,398	1,032,626	875,772	45.9	1.18
CALIFORNIA	24,873,388	20,417,972	4,455,416	17.9	4.58
COLORADO	2,609,286	1,826,696	782,590	30.0	2.33
CONNECTICUT	2,498,066	1,796,106	701,960	28.1	2.56
DELAWARE	316,114	159,270	156,844	49.6	1.02
DISTRICT OF COLUMBIA	337,933	197,448	140,485	41.6	1.41
FLORIDA	11,526,421	9,368,379	2,158,042	18.7	4.34
GEORGIA	3,529,516	1,770,871	1,758,645	49.8	1.01
HAWAII	675,284	349,343	325,941	48.3	1.07
IDAHO	515,341	313,869	201,472	39.1	1.56
ILLINOIS	13,031,520	9,443,192	3,588,328	27.5	2.63
INDIANA	3,500,042	1,805,156	1,694,886	48.4	1.07
IOWA	1,846,921	1,073,107	773,814	41.9	1.39
KANSAS	1,075,120	584,447	490,673	45.6	1.19
KENTUCKY	2,722,477	1,512,057	1,210,420	44.5	1.25
LOUISIANA	2,202,857	1,180,594	1,022,263	46.4	1.15
MAINE	636,902	560,891	76,011	11.9	7.38
MARYLAND	6,322,815	5,140,034	1,182,781	18.7	4.35
MASSACHUSETTS	9,306,373	7,444,697	1,861,676	20.0	4.00
MICHIGAN	4,916,843	3,126,838	1,790,005	36.4	1.75
MINNESOTA	7,267,956	6,359,482	908,474	12.5	7.00
MISSISSIPPI	1,843,546	1,078,512	765,034	41.5	1.41
MISSOURI	3,257,578	1,786,865	1,470,713	45.1	1.21
MONTANA	402,487	238,388	164,099	40.8	1.45
NEBRASKA	709,894	344,662	365,232	51.4	0.94
NEVADA	727,223	591,471	135,752	18.7	4.36
NEW HAMPSHIRE	408,952	202,320	206,632	50.5	0.98
NEW JERSEY	4,725,595	2,740,224	1,985,371	42.0	1.38
NEW MEXICO	902,071	299,337	602,734	66.8	0.50
NEW YORK	19,929,168	14,751,958	5,177,210	26.0	2.85
NORTH CAROLINA	3,275,988	1,638,649	1,637,339	50.0	1.00
NORTH DAKOTA	446,096	231,833	214,263	48.0	1.08
OHIO	6,324,766	3,214,769	3,109,997	49.2	1.03
OKLAHOMA	2,258,925	1,537,526	721,399	31.9	2.13
OREGON	1,806,000	1,192,809	613,191	34.0	1.95
PENNSYLVANIA	9,280,129	5,004,288	4,275,841	46.1	1.17
RHODE ISLAND	1,752,768	1,444,188	308,580	17.6	4.68

TABLE F-3

SOUTH CAROLINA	2,154,326	1,112,679	1,041,647	48.4	1.07
SOUTH DAKOTA	503,106	231,847	271,259	53.9	0.85
TENNESSEE	3,958,638	1,264,638	2,694,000	68.1	0.47
TEXAS	8,386,424	4,941,340	3,445,084	41.1	1.43
UTAH	1,124,975	748,715	376,260	33.4	1.99
VERMONT	497,995	360,330	137,665	27.6	2.62
VIRGINIA	4,406,257	3,108,549	1,297,708	29.5	2.40
WASHINGTON	2,186,017	1,459,747	726,270	33.2	2.01
WEST VIRGINIA	1,623,850	1,107,830	516,020	31.8	2.15
WISCONSIN	3,486,798	1,859,026	1,627,772	46.7	1.14
WYOMING	213,214	106,607	106,607	50.0	1.00
TOTAL U.S.	$192,892,230	$130,895,823	$61,996,407	32.1	2.11
AMERICAN SAMOA	30,048	0	30,048	100.0	0.00
GUAM	309,719	300,895	8,824	2.8	34.10
PUERTO RICO	1,996,456	998,228	998,228	50.0	1.00
VIRGIN ISLANDS	29,616	0	29,616	100.0	0.00
OUTLYING AREAS	$2,365,839	$1,299,123	$1,066,716	45.1	1.22
U.S. AND OUTLYING AREAS	$195,258,069	$132,194,946	$63,063,123	32.3	2.10

SOURCE U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-4 OUTLAYS FOR PROGRAMS FOR DISADVANTAGED ENROLLEES UNDER SECTION 110 (INCLUDING CARRYOVER)
BY SOURCE OF FUNDS, PERCENT, RATIO, AND BY STATE
UNITED STATES, OUTLYING AREAS SCHOOL YEAR 1979-80

STATE OR OUTLYING AREA	OUTLAYS			FEDERAL AS PERCENT OF TOTAL	RATIO OF NON-FEDERAL TO FEDERAL
	TOTAL	NON-FEDERAL	FEDERAL		
ALABAMA	4,589,009	2,186,099	2,402,910	52.4	0.91
ALASKA	461,688	366,650	95,038	20.6	3.86
ARIZONA	2,494,612	1,207,775	1,286,837	51.6	0.94
ARKANSAS	3,525,042	1,970,500	1,554,542	44.1	1.27
CALIFORNIA	32,741,522	25,731,064	7,010,458	21.4	3.67
COLORADO	2,728,025	1,345,285	1,382,740	50.7	0.97
CONNECTICUT	10,449,717	9,258,235	1,191,482	11.4	7.77
DELAWARE	585,186	318,540	266,646	45.6	1.19
DISTRICT OF COLUMBIA	641,731	401,785	239,946	37.4	1.67
FLORIDA	41,419,839	37,685,551	3,734,288	9.0	10.09
GEORGIA	5,696,136	2,892,564	2,803,572	49.2	1.03
HAWAII	1,649,996	1,173,997	475,999	28.8	2.47
IDAHO	856,929	420,088	436,841	51.0	0.96
ILLINOIS	22,701,526	17,430,808	5,270,718	23.2	3.31
INDIANA	6,643,497	3,671,728	2,971,769	43.4	1.30
IOWA	3,682,233	2,083,740	1,598,493	43.4	1.30
KANSAS	1,658,823	849,731	809,092	48.8	1.05
KENTUCKY	4,622,127	2,280,937	2,341,190	50.7	0.97
LOUISIANA	7,976,112	5,810,461	2,165,651	27.2	2.68
MAINE	1,093,271	818,887	274,384	25.1	2.98
MARYLAND	17,881,365	15,631,052	2,250,313	12.6	6.95
MASSACHUSETTS	7,280,076	3,989,409	3,290,667	45.2	1.21
MICHIGAN	11,747,672	7,374,976	4,372,696	37.2	1.69
MINNESOTA	5,038,872	2,824,339	2,214,533	43.9	1.28
MISSISSIPPI	2,629,485	1,324,693	1,304,792	49.6	1.02
MISSOURI	3,492,394	1,848,948	1,643,446	47.1	1.13
MONTANA	924,111	461,646	462,465	50.0	1.00
NEBRASKA	1,805,768	911,023	894,745	49.5	1.02
NEVADA	1,059,026	793,376	265,650	25.1	2.99
NEW HAMPSHIRE	784,989	359,616	425,373	54.2	0.85
NEW JERSEY	9,192,095	5,791,389	3,400,706	37.0	1.70
NEW MEXICO	1,247,187	6[illegible],471	580,716	46.6	1.15
NEW YORK	98,664,473	89,311,077	9,353,396	9.5	9.55
NORTH CAROLINA	6,140,901	3,072,122	3,068,779	50.0	1.00
NORTH DAKOTA	761,630	404,329	357,301	46.9	1.13
OHIO	53,765,157	47,948,447	5,816,710	10.8	8.24
OKLAHOMA	4,197,747	2,990,559	1,207,188	28.8	2.48
OREGON	2,509,892	1,455,814	1,054,078	42.0	1.38
PENNSYLVANIA	16,338,153	9,537,747	6,800,406	41.6	1.40
RHODE ISLAND	3,797,925	3,230,894	567,031	14.9	5.70

TABLE F-4

SOUTH CAROLINA	4,112,874	2,056,437	2,056,437	50.0	1.00
SOUTH DAKOTA	777,914	396,935	380,979	49.0	1.04
TENNESSEE	6,552,605	2,649,462	3,903,143	59.6	0.68
TEXAS	24,348,290	18,574,516	5,773,774	23.7	3.22
UTAH	2,622,643	1,957,890	664,753	25.3	2.95
VERMONT	709,362	444,099	265,263	37.4	1.67
VIRGINIA	5,270,429	2,779,218	2,491,211	47.3	1.12
WASHINGTON	3,842,298	2,795,977	1,046,321	27.2	2.67
WEST VIRGINIA	2,629,805	1,651,444	978,361	37.2	1.69
WISCONSIN	11,004,617	8,520,117	2,484,500	22.6	3.43
WYOMING	242,094	121,047	121,047	50.0	1.00
TOTAL U.S.	$467,788,870	$359,979,494	$107,809,376	23.0	3.34
AMERICAN SAMOA	36,126	0	36,126	100.0	0.00
GUAM	679,200	601,790	77,410	11.4	7.77
PUERTO RICO	5,877,848	4,100,578	1,777,270	30.2	2.31
VIRGIN ISLANDS	47,733	0	47,733	100.0	0.00
OUTLYING AREAS	$6,640,907	$4,702,368	$1,938,539	29.2	2.43
U.S. AND OUTLYING AREAS	$474,429,777	$364,681,862	$109,747,915	23.1	3.32

SOURCE U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-5 OUTLAYS FOR PROGRAMS FOR ENROLLEES WITH LIMITED ENGLISH PROFICIENCY UNDER SECTION 110 (INCLUDING CARRYOVER)

UNITED STATES, OUTLYING AREAS SCHOOL YEAR 1979-80

STATE OR OUTLYING AREA	OUTLAYS TOTAL	 NON-FEDERAL	 FEDERAL	FEDERAL AS PERCENT OF TOTAL	RATIO OF NON-FEDERAL TO FEDERAL
ALABAMA	1,443	0	1,443	100.0	0.00
ALASKA	0	0	0	.	.
ARIZONA	149,697	20,662	129,035	86.2	0.16
ARKANSAS	29,763	16,756	13,007	43.7	1.29
CALIFORNIA	3,665,615	3,148,500	517,115	14.1	6.09
COLORADO	54,041	0	54,041	100.0	0.00
CONNECTICUT	134,093	0	134,093	100.0	0.00
DELAWARE	26,245	4,845	21,400	81.5	0.23
DISTRICT OF COLUMBIA	0	0	0	.	.
FLORIDA	685,671	304,281	381,390	55.6	0.80
GEORGIA	168,620	84,310	84,310	50.0	1.00
HAWAII	38,453	19,637	18,816	48.9	1.04
IDAHO	17,680	1,733	15,947	90.2	0.11
ILLINOIS	1,060,128	715,363	344,765	32.5	2.07
INDIANA	127,123	83,388	43,735	34.4	1.91
IOWA	160,818	111,559	49,259	30.6	2.26
KANSAS	81,416	36,200	45,216	55.5	0.80
KENTUCKY	35,689	0	35,689	100.0	0.00
LOUISIANA	35,000	0	35,000	100.0	0.00
MAINE	0	0	0	.	.
MARYLAND	115,950	0	115,950	100.0	0.00
MASSACHUSETTS	719,898	679,188	40,710	5.7	16.68
MICHIGAN	350,027	129,834	220,193	62.9	0.59
MINNESOTA	419,208	209,604	209,604	50.0	1.00
MISSISSIPPI	0	0	0	.	.
MISSOURI	0	0	0	.	.
MONTANA	3,525	0	3,525	100.0	0.00
NEBRASKA	8,258	826	7,432	90.0	0.11
NEVADA	70,262	65,920	4,342	6.2	15.18
NEW HAMPSHIRE	58,366	44,160	14,206	24.3	3.11
NEW JERSEY	226,166	26,776	199,390	88.2	0.13
NEW MEXICO	434,379	174,645	259,734	59.8	0.67
NEW YORK	13,417,678	12,178,783	1,238,895	9.2	9.83
NORTH CAROLINA	35,016	17,508	17,508	50.0	1.00
NORTH DAKOTA	13,587	6,793	6,794	50.0	1.00
OHIO	97,268	14,809	82,459	84.8	0.18
OKLAHOMA	5,615	0	5,615	100.0	0.00
OREGON	100,368	50,184	50,184	50.0	1.00
PENNSYLVANIA	515,213	337,747	177,466	34.4	1.90
RHODE ISLAND	492,508	462,705	29,803	6.1	15.53

TABLE F-5

SOUTH CAROLINA	1,782	891	891	50.0	1.00
SOUTH DAKOTA	0	0	0	.	.
TENNESSEE	7,500	3,750	3,750	50.0	1.00
TEXAS	0	0	0	.	.
UTAH	189,820	96,713	93,107	49.1	1.04
VERMONT	0	0	0	.	.
VIRGINIA	59,234	6,370	52,864	89.2	0.12
WASHINGTON	796,032	786,137	9,895	1.2	79.45
WEST VIRGINIA	7,774	3,887	3,887	50.0	1.00
WISCONSIN	364,610	237,564	127,046	34.8	1.87
WYOMING	4,000	2,000	2,000	50.0	1.00
TOTAL U.S.	$24,985,539	$20,084,028	$4,901,511	19.6	4.10
AMERICAN SAMOA	12,818	0	12,818	100.0	0.00
GUAM	0	0	0	.	.
PUERTO RICO	498,926	249,463	249,463	50.0	1.00
VIRGIN ISLANDS	0	0	0	.	.
OUTLYING AREAS	$511,744	$249,463	$262,281	51.3	0.95
U.S. AND OUTLYING AREAS	$25,497,283	$20,333,491	$5,163,792	20.3	3.94

SOURCE U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-6 OUTLAYS FOR ADULT AND POSTSECONDARY EDUCATION UNDER SECTION 110 (INCLUDING CARRYOVER)
BY SOURCE OF FUNDS, PERCENT, RATIO, AND BY STATE
UNITED STATES, OUTLYING AREAS SCHOOL YEAR 1979-80

STATE OR OUTLYING AREA	OUTLAYS TOTAL	OUTLAYS NON-FEDERAL	OUTLAYS FEDERAL	FEDERAL AS PERCENT OF TOTAL	RATIO OF NON-FEDERAL TO FEDERAL
ALABAMA	24,542,502	23,021,641	1,520,861	6.2	15.14
ALASKA	360,905	309,670	51,235	14.2	6.04
ARIZONA	14,720,345	13,436,371	1,283,974	8.7	10.46
ARKANSAS	13,372,905	11,855,371	1,517,534	11.3	7.81
CALIFORNIA	517,282,220	496,896,583	20,385,637	3.9	24.37
COLORADO	29,457,790	24,894,327	4,563,463	15.5	5.46
CONNECTICUT	12,716,143	11,685,285	1,030,858	8.1	11.34
DELAWARE	16,572,694	16,346,700	225,994	1.4	72.33
DISTRICT OF COLUMBIA	787,798	611,848	175,950	22.3	3.48
FLORIDA	334,541,987	328,591,113	5,950,874	1.8	55.22
GEORGIA	43,770,165	37,336,989	6,433,176	14.7	5.80
HAWAII	7,801,628	7,337,295	464,333	6.0	15.80
IDAHO	8,525,927	8,009,521	516,406	6.1	15.51
ILLINOIS	110,339,892	104,494,407	5,845,485	5.3	17.88
INDIANA	46,194,123	42,709,181	3,484,942	7.5	12.26
IOWA	51,140,522	48,044,999	3,095,523	6.1	15.52
KANSAS	19,574,285	17,755,493	1,818,792	9.3	9.76
KENTUCKY	17,850,882	16,159,602	1,691,280	9.5	9.55
LOUISIANA	36,789,999	34,878,965	1,911,034	5.2	18.25
MAINE	10,173,879	8,887,796	1,286,083	12.6	6.91
MARYLAND	35,513,516	33,756,271	1,757,245	4.9	19.21
MASSACHUSETTS	37,682,409	36,723,562	958,847	2.5	38.30
MICHIGAN	80,924,694	77,256,329	3,668,365	4.5	21.06
MINNESOTA	73,352,343	66,356,191	6,996,152	9.5	9.48
MISSISSIPPI	16,287,794	15,142,792	1,145,002	7.0	13.23
MISSOURI	18,913,064	15,868,697	3,044,367	16.1	5.21
MONTANA	6,213,112	4,811,768	1,401,344	22.6	3.43
NEBRASKA	8,486,306	7,758,350	727,956	8.6	10.66
NEVADA	3,294,607	2,962,754	331,853	10.1	8.93
NEW HAMPSHIRE	631,235	303,552	327,683	51.9	0.93
NEW JERSEY	68,705,464	65,558,629	3,146,835	4.6	20.83
NEW MEXICO	14,710,406	13,029,771	1,680,635	11.4	7.75
NEW YORK	268,904,890	261,800,832	7,104,058	2.6	36.85
NORTH CAROLINA	126,640,760	124,106,353	2,534,407	2.0	48.97
NORTH DAKOTA	5,664,145	4,965,937	698,208	12.3	7.11
OHIO	44,622,170	38,713,836	5,908,334	13.2	6.55
OKLAHOMA	19,311,620	17,194,092	2,117,528	11.0	8.12
OREGON	27,155,868	25,418,575	1,737,293	6.4	14.63
PENNSYLVANIA	54,609,651	48,005,818	6,603,833	12.1	7.27
RHODE ISLAND	2,955,147	2,253,160	701,987	23.8	3.21

TABLE F-6

SOUTH CAROLINA	26,685,806	24,930,651	1,755,155	6.6	14.20
SOUTH DAKOTA	3,614,598	2,964,032	650,566	18.0	4.56
TENNESSEE	30,528,630	28,075,217	2,453,413	8.0	11.44
TEXAS	194,251,889	188,855,881	5,396,008	2.8	35.00
UTAH	16,344,793	15,151,469	1,193,324	7.3	12.70
VERMONT	508,166	319,888	188,278	37.1	1.70
VIRGINIA	28,570,048	26,842,047	1,728,001	6.0	15.53
WASHINGTON	93,603,044	91,770,041	1,833,003	2.0	50.07
WEST VIRGINIA	13,301,006	12,088,017	1,212,989	9.1	9.97
WISCONSIN	122,358,798	118,478,049	3,880,749	3.2	30.53
WYOMING	1,590,715	1,463,084	127,631	8.0	11.46
TOTAL U.S.	$2,762,453,285	$2,626,188,802	$136,264,483	4.9	19.27
AMERICAN SAMOA	261,402	201,140	60,262	23.1	3.34
GUAM	620,126	568,570	51,556	8.3	11.03
PUERTO RICO	5,726,544	4,016,423	1,710,121	29.9	2.35
VIRGIN ISLANDS	36,180	0	36,180	100.0	0.00
OUTLYING AREAS	$6,644,252	$4,786,133	$1,858,119	28.0	2.58
U.S. AND OUTLYING AREAS	$2,769,097,537	$2,630,974,935	$138,122,602	5.0	19.05

SOURCE U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE E-7 OUTLAYS FOR VOCATIONAL EDUCATION (VEA) SECTION 120 PROGRAMS, BY AUTHORIZATION YEAR AND SOURCE OF FUNDS, AND BY PROGRAM: SCHOOL YEAR 1979-80

	FISCAL YEAR 1980			FISCAL YEAR 1978 AND 1979		
PROGRAM	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
VOCATIONAL EDUCATION PROGRAMS	4,648,589,528	4,381,037,066	267,552,462	321,377,012	214,234,270	107,142,742
WORK STUDY PROGRAMS	19,484,285	15,341,603	4,142,682	3,758,037	674,218	3,083,819
COOPERATIVE EDUCATION PROGRAMS	125,713,155	117,796,901	7,916,254	4,370,751	1,401,913	2,968,838
ENERGY EDUCATION PROGRAMS	4,586,161	3,820,076	766,085	185,642	11,276	174,366
CONSTRUCTION	104,736,503	99,271,063	5,465,440	31,630,628	23,307,067	8,323,561
FULL-TIME SEX EQUITY PERSONNEL	3,170,497	1,163,426	2,007,071	942,622	841	941,781
1/STIPENDS	611,807	24,488	587,319	0	0	0
PLACEMENT SERVICES	3,684,965	3,282,350	402,615	86,006	3,823	82,183
INDUSTRIAL ARTS	170,587,095	165,981,941	4,605,154	1,927,152	1,120,304	806,848
SUPPORT SERVICES FOR WOMEN	2,242,351	1,266,371	975,980	130,539	13,053	117,486
DAY CARE SERVICES	1,180,984	741,173	439,811	380,605	23,122	357,483
VOCED FOR DISPLACED HOMEMAKERS	9,102,681	6,843,472	2,259,209	976,828	99,972	876,856
2/RESIDENTIAL SCHOOLS	4,534,991	3,794,384	740,607	29,416	0	29,416
CONTRACTED SERVICES	3,738,695	3,288,098	450,597	22,066	12,616	9,450
STATE ADMINISTRATION	76,701,902	47,311,943	29,389,959	7,909,221	3,222,723	4,686,498
LOCAL ADMINISTRATION	300,809,005	295,148,746	5,660,259	6,916,911	5,249,241	1,667,670
SECTION TOTAL	$5,479,474,605	$5,146,113,101	$333,361,504	$380,643,436	$249,374,439	$131,268,997

NOTE: NO SUBSECTION TABLE FOR THE FOLLOWING:
1/ STIPENDS--OHIO ONLY;
2/ RESIDENTIAL SCHOOLS--GEORGIA, KENTUCKY, AND PUERTO RICO ONLY.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE E-8 VOCATIONAL EDUCATION (VEA) SECTION 120 EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80
(INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

STATE OR OUTLYING AREA	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	71,058	61,309	9,749	70,627	61,304	9,323	426	0	426
ALASKA	11,236	10,336	900	10,723	10,336	388	513	0	513
ARIZONA	38,264	33,016	5,248	38,264	33,016	5,248	0	0	0
ARKANSAS	30,376	26,124	4,252	30,376	26,124	4,252	0	0	0
CALIFORNIA	701,518	662,066	39,452	701,518	662,066	39,452	0	0	0
COLORADO	72,761	66,990	5,770	72,761	66,990	5,770	0	0	0
CONNECTICUT	56,061	50,387	5,674	55,438	50,387	5,052	622	0	622
DELAWARE	19,030	17,898	1,132	19,030	17,898	1,132	0	0	0
DISTRICT OF COLUMBIA	4,950	3,868	1,082	4,886	3,868	1,018	64	0	64
FLORIDA	397,105	367,215	29,890	385,743	367,215	18,528	11,362	0	11,362
GEORGIA	110,358	96,842	13,516	109,453	96,842	12,611	905	0	905
HAWAII	13,649	11,821	1,829	13,649	11,821	1,829	0	0	0
IDAHO	14,793	12,815	1,978	14,793	12,815	1,978	0	0	0
ILLINOIS	354,842	327,797	27,045	350,430	327,797	22,633	4,412	0	4,412
INDIANA	81,184	69,481	11,703	81,184	69,481	11,703	0	0	0
IOWA	69,168	63,091	6,077	69,168	63,091	6,077	0	0	0
KANSAS	38,695	34,283	4,412	38,695	34,283	4,412	0	0	0
KENTUCKY	84,864	76,753	8,111	84,493	76,753	7,740	371	0	371
LOUISIANA	78,684	68,919	9,765	78,684	68,919	9,765	0	0	0
MAINE	20,322	18,501	1,821	20,322	18,501	1,821	0	0	0
MARYLAND	105,903	96,997	8,906	105,285	96,997	8,289	618	0	618
MASSACHUSETTS	230,275	212,548	17,726	222,813	212,548	10,265	7,462	0	7,462
MICHIGAN	208,954	178,819	30,135	201,599	178,819	22,780	7,355	0	7,355
MINNESOTA	101,247	91,053	10,194	101,247	91,053	10,194	0	0	0
MISSISSIPPI	40,448	34,809	5,639	40,448	34,809	5,639	0	0	0
MISSOURI	67,153	57,580	9,573	67,153	57,580	9,573	0	0	0
MONTANA	19,209	16,748	2,461	18,898	16,748	2,150	312	0	312
NEBRASKA	19,573	16,099	3,474	19,573	16,099	3,474	0	0	0
NEVADA	10,231	9,391	840	10,231	9,391	840	0	0	0
NEW HAMPSHIRE	10,302	8,269	2,032	9,844	8,269	1,574	458	0	458
NEW JERSEY	160,275	147,522	12,753	160,275	147,522	12,753	0	0	0
NEW MEXICO	26,794	21,936	4,858	25,275	21,936	3,339	1,519	0	1,519
NEW YORK	585,693	543,149	42,544	585,693	543,149	42,544	0	0	0
NORTH CAROLINA	182,491	169,635	12,857	182,491	169,635	12,857	0	0	0
NORTH DAKOTA	13,913	12,358	1,555	13,913	12,358	1,555	0	0	0
OHIO	313,303	288,155	25,148	310,797	288,155	22,642	2,506	0	2,506
OKLAHOMA	78,169	71,484	6,685	77,502	71,484	6,018	668	0	668
OREGON	67,573	61,562	6,011	66,286	61,562	4,724	1,287	0	1,287
PENNSYLVANIA	310,209	276,255	33,950	302,793	276,255	26,538	7,412	0	7,412
RHODE ISLAND	24,835	22,842	1,995	24,717	22,840	1,877	118	0	118

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SOUTH CAROLINA	95,058	87,158	7,900	95,058	87,158	7,900	0	0	0
SOUTH DAKOTA	8,722	7,289	1,433	8,722	7,289	1,433	0	0	0
TENNESSEE	105,143	95,699	9,443	105,143	95,699	9,443	0	0	0
TEXAS	281,401	246,597	34,805	268,685	246,597	22,088	12,717	0	12,717
UTAH	42,911	39,532	3,379	42,911	39,532	3,379	0	0	0
VERMONT	9,387	8,297	1,090	9,387	8,297	1,090	0	0	0
VIRGINIA	134,789	123,816	10,973	134,789	123,816	10,973	0	0	0
WASHINGTON	174,155	164,225	9,930	168,931	164,225	4,707	5,223	0	5,223
WEST VIRGINIA	51,143	47,128	4,014	51,120	47,128	3,991	23	0	23
WISCONSIN	150,332	133,541	16,791	143,240	133,541	9,698	7,093	0	7,093
WYOMING	4,521	3,639	882	4,395	3,639	757	125	0	125
TOTAL U.S.	$5,903,021	$5,373,637	$529,382	$5,829,451	$5,373,637	$455,816	$73,571	$0	$73,571
AMERICAN SAMOA	715	537	178	685	537	148	30	0	30
NORTHERN MARIANAS	.	0	.	.	.	.	.	0	.
GUAM	2,678	2,407	271	2,598	2,407	191	80	0	80
PUERTO RICO	27,792	18,906	8,886	27,150	18,906	8,244	642	0	642
TRUST TERRITORY	.	0	.	.	.	.	.	0	.
VIRGIN ISLANDS	303	0	303	234	0	234	69	0	69
OUTLYING AREAS	.	$21,850	.	.	.	.	.	$0	.
U.S. AND OUTLYING AREAS	.	$5,395,487	.	.	.	.	.	$0	.

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-9 OUTLAYS FOR VOCATIONAL EDUCATION (VEA) SECTION 130 PROGRAMS, BY AUTHORIZATION YEAR AND SOURCE OF FUNDS, AND BY PROGRAM: SCHOOL YEAR 1979-80

PROGRAM	FISCAL YEAR 1980			FISCAL YEAR 1978 AND 1979		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
TOTAL--GCU	31,192,436	16,165,915	15,026,521	17,668,871	2,327,633	15,341,238
GUIDANCE AND COUNSELING	214,877,019	188,603,534	26,273,485	39,155,735	24,753,619	14,402,116
PRESERVICE AND INSERVICE TRAINING	35,072,767	21,527,348	13,545,419	13,157,268	3,501,104	9,656,164
SEX-BIAS GRANTS	3,341,523	1,711,112	1,630,411	661,704	125,037	536,667
STATE ADMINISTRATION	17,791,568	9,878,449	7,913,119	2,485,861	1,107,425	1,378,436
LOCAL ADMINISTRATION	33,748,088	32,353,656	1,394,432	1,347,371	1,104,418	242,953
SECTION TOTAL	$336,023,401	$270,240,014	$65,783,387	$74,476,810	$32,919,236	$41,557,574

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-10 VOCATIONAL EDUCATION (VEA) SECTION 130 EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80
(INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
STATE OR OUTLYING AREA	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	5,088	3,449	1,640	5,029	3,449	1,580	59	0	59
ALASKA	263	59	203	152	59	92	111	0	111
ARIZONA	1,867	733	1,134	1,867	733	1,134	0	0	0
ARKANSAS	5,561	4,429	1,132	5,561	4,429	1,132	0	0	0
CALIFORNIA	51,186	44,576	6,610	51,186	44,576	6,610	0	0	0
COLORADO	4,420	3,063	1,357	4,420	3,063	1,357	0	0	0
CONNECTICUT	2,810	1,773	1,037	2,717	1,773	944	93	0	93
DELAWARE	739	444	295	739	444	295	0	0	0
DISTRICT OF COLUMBIA	399	56	343	391	56	335	8	0	8
FLORIDA	22,268	16,349	5,919	19,924	16,349	3,574	2,345	0	2,345
GEORGIA	7,341	3,830	3,511	6,187	3,830	2,357	1,153	0	1,153
HAWAII	1,079	593	486	1,079	593	486	0	0	0
IDAHO	1,251	743	508	1,251	743	508	0	0	0
ILLINOIS	10,275	1,518	8,757	7,311	1,518	5,793	2,964	0	2,964
INDIANA	3,690	1,243	2,447	3,690	1,243	2,447	0	0	0
IOWA	1,898	371	1,526	1,898	371	1,526	0	0	0
KANSAS	2,432	1,500	932	2,432	1,500	932	0	0	0
KENTUCKY	3,135	833	2,303	3,064	833	2,231	72	0	72
LOUISIANA	11,141	9,008	2,132	11,141	9,008	2,132	0	0	0
MAINE	930	412	518	930	412	518	0	0	0
MARYLAND	5,734	3,432	2,302	5,141	3,432	1,709	593	0	593
MASSACHUSETTS	11,700	7,179	4,521	9,526	7,179	2,347	2,174	0	2,174
MICHIGAN	29,001	22,121	6,880	27,337	22,121	5,216	1,664	0	1,664
MINNESOTA	9,080	7,241	1,840	9,057	7,241	1,816	23	0	23
MISSISSIPPI	7,499	6,052	1,446	7,499	6,052	1,446	0	0	0
MISSOURI	19,134	16,481	2,653	19,134	16,481	2,653	0	0	0
MONTANA	949	169	780	639	169	470	311	0	311
NEBRASKA	2,211	1,301	910	2,211	1,301	910	0	0	0
NEVADA	356	36	320	356	36	320	0	0	0
NEW HAMPSHIRE	971	380	591	835	380	455	136	0	136
NEW JERSEY	6,243	3,455	2,788	6,243	3,455	2,788	0	0	0
NEW MEXICO	1,480	71	1,409	903	71	832	577	0	577
NEW YORK	8,440	802	7,638	8,440	802	7,638	0	0	0
NORTH CAROLINA	13,045	9,929	3,116	13,045	9,929	3,116	0	0	0
NORTH DAKOTA	760	392	368	760	392	368	0	0	0
OHIO	20,790	14,508	6,282	20,339	14,508	5,831	451	0	451
OKLAHOMA	6,101	4,087	2,015	6,047	4,087	1,961	54	0	54
OREGON	1,698	132	1,566	1,333	132	1,201	365	0	365
PENNSYLVANIA	27,867	20,141	7,727	26,297	20,141	6,156	1,571	0	1,571
RHODE ISLAND	1,411	741	670	1,393	741	652	18	0	18

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SOUTH CAROLINA	8,864	7,026	1,838	8,864	7,026	1,838	0	0	0
SOUTH DAKOTA	599	153	446	599	153	446	0	0	0
TENNESSEE	6,087	3,581	2,505	6,087	3,581	2,505	0	0	0
TEXAS	55,844	44,942	10,901	51,967	44,942	7,025	3,876	0	3,876
UTAH	3,067	1,996	1,072	3,067	1,996	1,072	0	0	0
VERMONT	496	212	284	496	212	284	0	0	0
VIRGINIA	5,276	2,080	3,196	5,276	2,080	3,196	0	0	0
WASHINGTON	10,199	7,450	2,749	8,645	7,450	1,195	1,555	0	1,555
WEST VIRGINIA	1,718	951	767	1,558	951	608	160	0	160
WISCONSIN	20,451	16,172	4,279	18,930	16,172	2,757	1,522	0	1,522
WYOMING	596	206	299	420	206	213	86	0	86
TOTAL U.S.	$425,350	$298,401	$126,948	$403,413	$298,401	$105,007	$21,941	$0	$21,941
AMERICAN SAMOA	55	10	45	48	10	38	7	0	7
NORTHERN MARIANAS	.	0	.	.	.	.	.	0	.
GUAM	624	602	22	620	602	18	4	0	4
PUERTO RICO	6,606	4,147	2,459	6,370	4,147	2,223	236	0	236
TRUST TERRITORY	.	0	.	.	.	.	.	0	.
VIRGIN ISLANDS	71	0	71	53	0	53	19	0	19
OUTLYING AREAS	.	$4,759	.	.	.	.	.	$0	.
U.S. AND OUTLYING AREAS	.	$303,160	.	.	.	.	.	$0	.

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-11 OUTLAYS FOR VOCATIONAL EDUCATION (VEA) SECTION 140 PROGRAMS, BY AUTHORIZATION YEAR AND SOURCE OF FUNDS, AND BY PROGRAM: SCHOOL YEAR 1979-80

	FISCAL YEAR 1980			FISCAL YEAR 1978 AND 1979		
PROGRAM	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
SPECIAL DISADVANTAGED	24,658,193	11,170,736	13,487,457	9,903,016	1,537,872	8,365,144

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-12 VOCATIONAL EDUCATION (VEA) SECTION 140 EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80 (INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

STATE OR OUTLYING AREA	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	492	3	490	492	3	490	0	0	0
ALASKA	49	0	49	39	0	39	10	0	10
ARIZONA	414	140	274	414	140	274	0	0	0
ARKANSAS	128	0	128	128	0	128	0	0	0
CALIFORNIA	3,727	2,050	1,676	3,727	2,050	1,676	0	0	0
COLORADO	301	142	159	301	142	159	0	0	0
CONNECTICUT	352	119	233	349	119	230	3	0	3
DELAWARE	110	50	60	110	50	60	0	0	0
DISTRICT OF COLUMBIA	52	0	52	49	0	49	3	0	3
FLORIDA	5,263	3,973	1,290	4,706	3,973	733	557	0	557
GEORGIA	1,352	0	1,352	1,128	0	1,128	223	0	223
HAWAII	88	0	88	88	0	88	0	0	0
IDAHO	149	32	117	149	32	117	0	0	0
ILLINOIS	1,597	372	1,226	1,597	372	1,226	0	0	0
INDIANA	560	0	560	560	0	560	0	0	0
IOWA	411	173	238	411	173	238	0	0	0
KANSAS	209	17	192	209	17	192	0	0	0
KENTUCKY	397	0	397	361	0	361	35	0	35
LOUISIANA	2,249	1,759	489	2,249	1,759	489	0	0	0
MAINE	419	257	162	419	257	162	0	0	0
MARYLAND	374	16	359	373	16	358	1	0	1
MASSACHUSETTS	1,185	0	1,185	321	0	321	863	0	863
MICHIGAN	1,132	236	896	1,089	236	853	43	0	43
MINNESOTA	393	0	393	393	0	393	0	0	0
MISSISSIPPI	559	295	264	559	295	264	0	0	0
MISSOURI	825	397	428	825	397	428	0	0	0
MONTANA	80	0	80	72	0	72	8	0	8
NEBRASKA	146	13	133	146	13	133	0	0	0
NEVADA	88	38	50	88	38	50	0	0	0
NEW HAMPSHIRE	79	0	79	69	0	69	10	0	10
NEW JERSEY	1,621	1,074	547	1,621	1,074	547	0	0	0
NEW MEXICO	314	0	314	169	0	169	145	0	145
NEW YORK	2,158	0	2,158	2,158	0	2,158	0	0	0
NORTH CAROLINA	555	14	541	555	14	541	0	0	0
NORTH DAKOTA	28	5	23	28	5	23	0	0	0
OHIO	1,225	122	1,102	1,218	122	1,096	7	0	7
OKLAHOMA	384	115	270	384	115	270	0	0	0
OREGON	368	0	368	368	0	368	0	0	0
PENNSYLVANIA	1,617	207	1,410	1,317	207	1,110	300	0	300
RHODE ISLAND	97	0	97	95	0	95	1	0	1

TABLE F-12

SOUTH CAROLINA	349	2	346	349	2	346	0	0	0
SOUTH DAKOTA	112	44	68	112	44	68	0	0	0
TENNESSEE	503	61	442	503	61	442	0	0	0
TEXAS	2,151	30	2,121	974	30	944	1,177	0	1,177
UTAH	141	0	141	141	0	141	0	0	0
VERMONT	79	0	79	79	0	79	0	0	0
VIRGINIA	1,226	562	663	1,226	562	663	0	0	0
WASHINGTON	693	75	618	337	75	262	356	0	356
WEST VIRGINIA	403	147	256	403	147	256	0	0	0
WISCONSIN	859	58	801	531	58	473	328	0	328
WYOMING	62	0	62	57	0	57	5	0	5
TOTAL U.S.	$38,125	$12,598	$25,526	$34,046	$12,598	$21,448	$4,075	$0	$4,075
AMERICAN SAMOA	9	0	9	9	0	9	0	0	0
NORTHERN MARIANAS	.	0	.	.	.	.	.	0	.
GUAM	121	112	10	114	112	2	8	0	8
PUERTO RICO	420	0	420	385	0	385	35	0	35
TRUST TERRITORY	.	0	.	.	.	.	.	0	.
VIRGIN ISLANDS	8	0	8	8	0	8	0	0	0
OUTLYING AREAS	.	$112	.	.	.	.	.	$0	.
U.S. AND OUTLYING AREAS	.	$12,710	.	.	.	.	.	$0	.

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-13 OUTLAYS FOR VOCATIONAL EDUCATION (VEA) SECTION 150 PROGRAMS,
BY AUTHORIZATION YEAR AND SOURCE OF FUNDS, AND BY PROGRAM:
SCHOOL YEAR 1979-80

PROGRAM	FISCAL YEAR 1980			FISCAL YEAR 1978 AND 1979		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
EDUCATION PROGRAMS IN NON-ECONOMICALLY DEPRESSED AREAS	240,247,280	231,461,271	8,786,009	9,214,347	5,606,169	3,608,178
ANCILLARY SERVICES IN NON-ECONOMICALLY DEPRESSED AREAS	8,673,965	5,267,004	3,406,961	1,235,736	273,487	962,249
EDUCATION PROGRAMS IN ECONOMICALLY DEPRESSED AREAS	223,838,946	205,346,950	18,491,996	9,087,781	3,416,951	5,670,830
ANCILLARY SERVICES IN ECONOMICALLY DEPRESSED AREAS	8,080,227	5,822,654	2,257,573	696,569	58,165	638,404
SECTION TOTAL	$480,840,418	$447,897,879	$32,942,539	$20,234,433	$9,354,772	$10,879,661

SOURCE : U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM

TABLE F-14 VOCATIONAL EDUCATION (VEA) SECTION 150 EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80
(INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
STATE OR OUTLYING AREA	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	8,630	7,771	859	8,571	7,771	800	59	0	59
ALASKA	390	288	102	340	288	52	50	0	50
ARIZONA	6,092	5,610	482	6,092	5,610	482	0	0	0
ARKANSAS	5,535	5,052	483	5,535	5,052	483	0	0	0
CALIFORNIA	58,458	55,023	3,435	58,458	55,023	3,435	0	0	0
COLORADO	6,514	5,999	515	6,514	5,999	515	0	0	
CONNECTICUT	8,091	7,589	502	8,039	7,589	450	52	0	52
DELAWARE	982	857	124	962	857	124	0	0	0
DISTRICT OF COLUMBIA	424	300	123	405	300	105	19	0	19
FLORIDA	22,712	19,685	3,026	21,333	19,685	1,648	1,378	0	1,378
GEORGIA	12,113	10,516	1,596	12,040	10,516	1,524	72	0	72
HAWAII	1,256	1,066	190	1,256	1,066	190	0	0	0
IDAHO	2,025	1,831	194	2,025	1,831	194	0	0	0
ILLINOIS	17,425	14,548	2,876	17,425	14,548	2,876	0	0	0
INDIANA	6,675	5,636	1,040	6,675	5,636	1,040	0	0	0
IOWA	6,037	5,452	585	6,037	5,452	585	0	0	0
KANSAS	5,389	4,904	485	5,389	4,904	485	0	0	0
KENTUCKY	9,702	8,963	739	9,679	8,963	716	22	0	22
LOUISIANA	8,572	7,628	943	8,572	7,628	943	0	0	0
MAINE	2,435	2,228	207	2,435	2,228	207	0	0	0
MARYLAND	17,658	16,876	781	17,613	16,876	736	45	0	45
MASSACHUSETTS	17,523	15,713	1,810	16,460	15,713	747	1,063	0	1,063
MICHIGAN	15,128	13,305	1,824	15,125	13,305	1,820	4	0	4
MINNESOTA	9,553	8,679	874	9,553	8,679	874	0	0	0
MISSISSIPPI	6,017	5,385	632	6,017	5,385	632	0	0	0
MISSOURI	8,419	7,410	1,010	8,419	7,410	1,010	0	0	0
MONTANA	3,712	3,430	282	3,548	3,430	119	164	0	164
NEBRASKA	3,141	2,827	314	3,141	2,827	314	0	0	0
NEVADA	1,417	1,312	105	1,417	1,312	105	0	0	0
NEW HAMPSHIRE	1,838	1,642	196	1,800	1,642	159	38	0	38
NEW JERSEY	5,032	3,914	1,118	5,032	3,914	1,118	0	0	0
NEW MEXICO	3,239	2,666	572	3,086	2,666	420	152	0	152
NEW YORK	13,481	10,218	3,263	13,481	10,218	3,263	0	0	0
NORTH CAROLINA	12,054	10,791	1,264	12,054	10,791	1,264	0	0	0
NORTH DAKOTA	1,763	1,617	147	1,763	1,617	147	0	0	0
OHIO	58,788	56,086	2,701	58,425	56,086	2,339	362	0	362
OKLAHOMA	5,927	5,318	609	5,913	5,318	595	14	0	14
OREGON	1,286	710	576	1,204	710	494	82	0	82
PENNSYLVANIA	20,998	18,357	2,641	20,367	18,357	2,010	631	0	631
RHODE ISLAND	2,065	1,867	199	2,054	1,867	187	12	0	12

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SOUTH CAROLINA	5,567	4,913	655	5,567	4,913	655	0	0	0
SOUTH DAKOTA	2,137	1,980	157	2,137	1,980	157	0	0	0
TENNESSEE	10,044	9,121	923	10,044	9,121	923	0	0	0
TEXAS	38,107	33,865	4,242	36,571	33,865	2,707	1,535	0	1,535
UTAH	806	506	300	806	506	300	0	0	0
VERMONT	1,409	1,277	131	1,409	1,277	131	0	0	0
VIRGINIA	13,603	12,552	1,051	13,603	12,552	1,051	0	0	0
WASHINGTON	15,123	14,180	943	14,566	14,180	386	557	0	557
WEST VIRGINIA	4,636	4,180	456	4,625	4,180	445	11	0	11
WISCONSIN	8,662	6,946	1,716	8,091	6,946	1,145	571	0	571
WYOMING	1,406	1,305	100	1,392	1,305	86	14	0	14
TOTAL U.S.	$499,996	$449,898	$50,098	$493,086	$449,898	$43,193	$6,907	$0	$6,907
AMERICAN SAMOA	62	42	20	58	42	16	4	0	4
NORTHERN MARIANAS	.	0	.	.	.	.	.	0	.
GUAM	230	229	2	229	229	0	1	0	1
PUERTO RICO	7,880	7,087	793	7,685	7,087	598	194	0	194
TRUST TERRITORY	.	0	.	.	.	.	.	0	.
VIRGIN ISLANDS	28	0	28	16	0	16	12	0	12
OUTLYING AREAS	.	$7,358	.	.	.	.	.	$0	.
U.S. AND OUTLYING AREAS	.	$457,252	.	.	.	.	.	$0	.

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-15 VOCATIONAL EDUCATION (VEA) SECTION 102d EXPENDITURES, BY SOURCE OF FUNDS, AND BY STATE OR OUTLYING AREA: SCHOOL YEAR 1979-80
(INCLUDES CARRYOVER AND UNLIQUIDATED OBLIGATIONS)

STATE OR OUTLYING AREA	EXPENDITURES			OUTLAYS			UNLIQUIDATED OBLIGATIONS		
	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL	TOTAL	NON-FEDERAL	FEDERAL
	AMOUNT, IN THOUSANDS								
ALABAMA	100	0	100	100	0	100	0	0	0
ALASKA	9	0	9	9	0	9	0	0	0
ARIZONA	54	0	54	54	0	54	0	0	0
ARKANSAS	35	0	35	35	0	35	0	0	0
CALIFORNIA	48	0	48	48	0	48	0	0	0
COLORADO	62	0	62	62	0	62	0	0	0
CONNECTICUT	10	0	10	10	0	10	0	0	0
DELAWARE	2	0	2	2	0	2	0	0	0
DISTRICT OF COLUMBIA	0	0	0	0	0	0	0	0	0
FLORIDA	375	312	63	331	312	19	44	0	44
GEORGIA	98	0	98	98	0	98	0	0	0
HAWAII	11	0	11	11	0	11	0	0	0
IDAHO	45	27	18	45	27	18	0	0	0
ILLINOIS	53	0	53	53	0	53	0	0	0
INDIANA	125	0	125	125	0	125	0	0	0
IOWA	0	0	0	0	0	0	0	0	0
KANSAS	33	0	33	33	0	33	0	0	0
KENTUCKY	73	56	17	73	56	17	0	0	0
LOUISIANA	25	0	25	25	0	25	0	0	0
MAINE	7	0	7	7	0	7	0	0	0
MARYLAND	89	0	89	7	0	7	81	0	81
MASSACHUSETTS	2	0	2	2	0	2	0	0	0
MICHIGAN	117	0	117	117	0	117	0	0	0
MINNESOTA	95	0	95	95	0	95	0	0	0
MISSISSIPPI	52	10	41	52	10	41	0	0	0
MISSOURI	84	0	84	84	0	84	0	0	0
MONTANA	20	0	20	20	0	20	0	0	0
NEBRASKA	8	0	8	8	0	8	0	0	0
NEVADA	13	0	13	13	0	13	0	0	0
NEW HAMPSHIRE	16	0	16	9	0	9	6	0	6
NEW JERSEY	107	0	107	107	0	107	0	0	0
NEW MEXICO	34	0	34	18	0	18	17	0	17
NEW YORK	246	0	246	246	0	246	0	0	0
NORTH CAROLINA	8	0	8	8	0	8	0	0	0
NORTH DAKOTA	6	0	6	6	0	6	0	0	0
OHIO	250	5	244	105	5	100	145	0	145
OKLAHOMA	94	25	69	94	25	69	0	0	0
OREGON	34	0	34	18	0	18	16	0	16
PENNSYLVANIA	196	0	196	188	0	188	8	0	8
RHODE ISLAND	14	0	14	14	0	14	0	0	0

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SOUTH CAROLINA	53	0	53	53	0	53	0	0	0
SOUTH DAKOTA	14	0	14	14	0	14	0	0	0
TENNESSEE	68	0	68	68	0	68	0	0	0
TEXAS	249	0	249	249	0	249	0	0	0
UTAH	22	0	22	22	0	22	0	0	0
VERMONT	0	0	0	0	0	0	0	0	0
VIRGINIA	84	0	84	84	0	84	0	0	0
WASHINGTON	78	0	78	13	0	13	65	0	65
WEST VIRGINIA	45	0	45	45	0	45	0	0	0
WISCONSIN	70	0	70	33	0	33	37	0	37
WYOMING	9	0	9	9	0	9	0	0	0
TOTAL U.S.	$3,342	$435	$2,905	$2,922	$435	$2,486	$419	$0	$419
AMERICAN SAMOA	2	0	2	2	0	2	0	0	0
NORTHERN MARIANAS	.	0	.	.	.	.	.	0	.
GUAM	0	0	0	0	0	0	0	0	0
PUERTO RICO	71	0	71	71	0	71	0	0	0
TRUST TERRITORY	.	0	.	.	.	.	.	0	.
VIRGIN ISLANDS	0	0	0	0	0	0	0	0	0
OUTLYING AREAS	.	$0	.	.	.	.	.	$0	.
U.S. AND OUTLYING AREAS	.	$435	.	.	.	.	.	$0	.

NOTE: DETAILS MAY NOT ADD TO TOTALS BECAUSE OF ROUNDING.

SOURCE: U.S. DEPARTMENT OF EDUCATION, NATIONAL CENTER FOR EDUCATION STATISTICS, VOCATIONAL EDUCATION DATA SYSTEM.

TABLE F-16 DIRECT INSTRUCTIONAL COSTS FOR VOCATIONAL EDUCATION BY SOURCE OF FUNDS BY INSTRUCTIONAL PROGRAM: SCHOOL YEAR 1979-80

INSTRUCTIONAL PROGRAM	TOTAL	SOURCE OF FUNDS	
		NON-FEDERAL	FEDERAL
AGRICULTURE EDUCATION	306,487,945	282,688,088	23,799,857
DISTRIBUTIVE EDUCATION	253,896,857	240,457,692	13,439,165
HEALTH OCCUPATIONS ED.	424,119,028	397,384,671	26,734,357
OCCUPATIONAL HOME EC.	194,192,923	182,129,032	12,063,891
HOME EC. (CONSMER & HMKG.)	431,527,022	406,932,241	24,594,781
INDUSTRIAL ARTS	173,480,978	168,008,696	5,472,282
OFFICE OCCUPATIONS	1,147,883,594	1,087,011,303	60,872,291
TECHNICAL EDUCATION	272,062,035	254,652,567	17,409,468
TRADE & INDUST. OCCUPATIONS	1,498,313,070	1,398,489,224	99,823,846
OTHER VOC. ED. INSTRUCTION	325,843,349	278,186,450	47,656,899

TABLE E-17 DIRECT INSTRUCTIONAL COSTS FOR VOCATIONAL EDUCATION BY SOURCE OF FUNDS BY STATE: SCHOOL YEAR 1979-80

STATE	TOTAL	SOURCE OF FUNDS NON-FEDERAL	 FEDERAL
ALABAMA	48,471,874	42,045,943	6,425,931
ALASKA	10,220,969	10,098,551	122,418
ARIZONA	29,987,923	25,784,400	4,203,523
ARKANSAS	31,164,211	26,758,256	4,405,955
CALIFORNIA	611,096,219	588,247,906	22,848,313
COLORADO	57,742,569	55,263,067	2,479,502
CONNECTICUT	51,342,877	47,210,547	4,132,330
DELAWARE	34,712,427	33,378,064	1,334,363
D.C.	5,977,994	5,225,868	752,126
FLORIDA	243,083,356	237,704,859	5,378,497
GEORGIA	110,649,761	96,455,193	14,194,568
HAWAII	14,014,264	12,363,004	1,651,260
IDAHO	13,457,269	11,216,942	2,240,327
ILLINOIS	325,451,247	312,769,494	12,681,753
INDIANA	73,760,251	66,486,626	7,273,625
IOWA	47,787,736	44,634,100	3,153,636
KANSAS	33,787,987	29,705,407	4,082,580
KENTUCKY	71,350,971	64,396,709	6,954,262
LOUISIANA	84,963,528	74,268,319	10,695,209
MAINE	15,091,841	14,311,958	779,883
MARYLAND	91,157,929	85,081,115	6,076,814
MASSACHUSETTS	193,541,437	182,663,205	10,878,232
MICHIGAN	171,564,235	153,253,638	18,310,597
MINNESOTA	25,878,535	25,878,535	0
MISSISSIPPI	41,866,750	36,698,399	5,168,351
MISSOURI	51,162,343	44,944,016	6,218,327
MONTANA	.	.	.
NEBRASKA	18,390,877	15,808,765	2,582,112
NEVADA	10,581,089	9,433,784	1,147,305
NEW HAMPSHIRE	11,316,381	9,668,219	1,648,162
NEW JERSEY	160,766,744	149,099,040	11,667,704
NEW MEXICO	26,049,681	24,327,165	1,722,516
NEW YORK	578,899,493	542,412,626	36,486,867
NORTH CAROLINA	154,575,931	140,523,649	14,052,282
NORTH DAKOTA	12,991,124	12,132,937	858,187
OHIO	341,070,088	324,995,464	16,074,624
OKLAHOMA	54,236,240	48,541,297	5,694,943
OREGON	13,666,805	9,826,843	3,839,962
PENNSYLVANIA	296,591,931	273,737,495	22,854,436
RHODE ISLAND	65,613,189	61,318,812	4,294,377
SOUTH CAROLINA	52,300,360	49,696,074	2,604,286
SOUTH DAKOTA	9,357,148	8,134,037	1,223,111
TENNESSEE	89,603,741	83,582,932	6,020,809
TEXAS	241,904,892	227,601,079	14,303,813
UTAH	35,662,483	32,840,022	2,822,461

TABLE F-1 DIRECT INSTRUCTIONAL COSTS FOR VOCATIONAL EDUCATION BY SOURCE OF FUNDS BY STATE: SCHOOL YEAR 1979-80

STATE	TOTAL	SOURCE OF FUNDS NON-FEDERAL	FEDERAL
VERMONT	8,001,349	7,080,918	920,431
VIRGINIA	136,848,389	126,993,944	9,854,445
WASHINGTON	91,731,506	88,480,682	3,250,824
WEST VIRGINIA	46,019,946	41,923,459	4,096,487
WISCONSIN	75,063,417	73,952,626	1,110,791
WYOMING	7,277,494	6,983,974	293,520
TOTAL U.S.	5,027,806,801	4,695,939,964	331,866,837

APPENDIX 2. ENROLLMENT TABLES 1979-80

E-1. Enrollment by instructional program by State

E-2. Enrollment by institutional stream by State

E-3. Enrollment by program area and institutional stream

E-4. Enrollment by race/ethnicity and non-resident alien designation and sex, and by program area

E-5. Special needs enrollment and percent of total enrollment by program area

E-6. Enrollment in cooperative education and apprentice programs, by program area and institutional stream

E-7. Enrollment by legislative purpose by State

E-8. Program completers by institutional stream by State

E-9. Program completers by institutional stream by instructional program

E-10. Special needs completers and percent of total completers, by program area

E-11. Program completers by racial/ethnic and non-resident alien designation and sex by instructional program

TABLE B-1 ENROLLMENT (VEA), BY INSTRUCTIONAL PROGRAM AREA AND BY STATE: 1979-80

STATE	TOTAL	AGRI-CULTURE	DISTRI-BUTION	HEALTH	CONS. AND HMAKG	OCCUP. HOME ECON	IND. ARTS	OFFICE OCCUP.	TECH-NICAL	TRADE AND INDUS	OTHER OEC
ALABAMA	233,390	33,663	8,365	10,901	56,340	6,833	5,438	38,593	1,887	65,193	6,087
ALASKA	11,318	113	1,025	285	2,052	140	58	3,128	285	4,236	N
ARIZONA	227,873	6,799	36,664	11,288	50,252	6,118	18,077	37,432	8,209	38,898	14,120
ARKANSAS	140,795	21,415	4,823	8,831	43,208	2,069	3,702	20,239	N	26,893	9,525
CALIFORNIA	2,143,350	77,758	152,010	85,832	365,346	54,496	152,715	672,358	184,751	401,641	76,443
COLORADO	141,355	4,042	8,883	6,589	31,787	4,067	N	39,163	11,939	31,476	3,409
CONNECTICUT	213,155	1,759	5,227	2,869	94,877	1,798	31,251	45,165	2,309	23,336	4,514
DELAWARE	46,797	2,389	1,236	1,640	3,205	4,662	10,725	9,703	487	7,516	5,234
D.C.	35,322	56	842	431	N	14,581	5,804	9,778	N	3,830	N
FLORIDA	1,185,608	56,510	98,307	83,756	164,674	131,542	54,004	209,631	37,319	270,950	78,895
GEORGIA	525,867	27,824	13,419	16,379	117,995	9,230	71,660	127,708	8,991	76,286	60,779
HAWAII	51,187	2,360	3,528	759	12,228	2,163	N	15,373	1,315	13,438	23
IDAHO	47,062	5,225	2,107	1,290	15,473	535	1,538	10,108	298	9,194	1,298
ILLINOIS	761,885	31,628	65,381	38,940	45,554	75,556	N	245,676	27,425	213,517	18,208
INDIANA	189,033	17,704	8,384	8,792	43,034	1,767	.	16,928	18,125	23,730	10,373
IOWA	369,946	35,419	13,702	97,914	102,726	8,777	36	33,270	4,639	50,702	22,761
KANSAS	103,662	15,858	5,551	7,875	27,403	4,097	N	14,011	1,130	27,268	464
KENTUCKY	297,582	22,431	12,426	8,562	67,491	3,476	11,809	33,271	1,119	77,887	59,110
LOUISIANA	258,006	17,314	7,572	11,048	49,178	10,471	27,924	87,442	1,704	44,716	637
MAINE	47,175	854	1,710	5,294	12,809	928	N	6,809	2,283	15,976	552
MARYLAND	268,195	4,835	9,383	10,879	95,818	1,649	N	86,151	14,517	36,440	8,923
MASSACHUSETTS	363,422	3,358	9,257	7,229	63,212	13,039	88,697	88,450	7,103	69,706	13,371
MICHIGAN	324,345	13,869	27,217	29,634	91,681	12,425	N	51,967	21,494	75,115	948
MINNESOTA	282,658	28,593	19,452	10,536	65,361	11,403	N	41,376	5,865	60,472	N
MISSISSIPPI	176,890	19,794	8,122	4,956	48,515	3,451	29,021	14,891	3,050	40,009	5,081
MISSOURI	255,835	22,323	15,665	16,060	86,791	7,682	N	33,010	7,323	50,598	16,383
MONTANA	16,350	4,129	1,322	551	N	792	N	2,860	114	5,516	1,066
NEBRASKA	98,419	10,523	5,823	11,824	24,073	3,751	N	18,600	N	20,179	3,686
NEVADA	36,529	968	2,137	549	3,135	1,299	1,419	13,889	973	9,973	2,187
NEW HAMPSHIRE	41,114	1,574	1,115	987	12,153	633	13,781	5,767	387	4,579	138
NEW JERSEY	629,255	3,465	19,927	11,587	77,523	3,970	326,964	114,671	18,395	52,730	23
NEW MEXICO	56,082	4,365	3,251	2,146	15,406	1,413	8,980	7,158	1,030	10,544	1,789
NEW YORK	1,293,909	15,979	41,286	42,106	276,747	12,192	376,994	350,395	30,625	147,585	N
NORTH CAROLINA	637,971	28,905	36,927	66,946	97,586	20,069	16,338	77,333	18,092	158,284	117,491
NORTH DAKOTA	43,184	6,406	3,274	1,394	12,280	1,922	3,439	6,242	990	7,903	234
OHIO	961,346	44,037	89,044	38,844	156,858	16,063	N	59,225	6,703	132,437	418,535
OKLAHOMA	160,234	19,601	9,614	10,371	28,474	5,491	1,091	32,645	9,596	39,252	4,094
OREGON	174,674	6,186	13,423	7,584	46,387	2,101	68	41,653	4,669	34,585	18,018
PENNSYLVANIA	436,001	20,087	16,645	24,113	68,937	9,689	15,905	98,486	26,207	138,527	17,405
RHODE ISLAND	85,209	935	1,049	1,029	15,082	1,047	19,524	25,416	480	7,746	12,101
SOUTH CAROLINA	207,021	16,440	7,387	6,082	41,749	1,884	5,195	52,817	9,939	41,665	23,863
SOUTH DAKOTA	28,302	4,980	1,470	995	14,018	489	N	1,578	N	4,772	N
TENNESSEE	321,774	18,856	13,600	13,933	54,677	9,251	36,221	52,321	14,466	99,260	9,189
TEXAS	1,096,186	119,104	64,278	36,612	356,211	27,638	82,636	104,472	28,284	205,207	71,744
UTAH	104,526	4,396	7,881	4,558	19,434	2,588	6,906	22,182	1,490	27,618	7,473
VERMONT	20,973	1,270	490	499	8,014	330	.	2,579	114	7,263	414

TABLE B-1 ENROLLMENT (VEA), BY INSTRUCTIONAL PROGRAM AREA AND BY STATE: 1979-80

STATE	TOTAL	AGRI-CULTURE	DISTRI-BUTION	HEALTH	CONS. AND HMMKG	OCCUP. HOME ECON	IND. ARTS	OFFICE OCCUP.	TECH-NICAL	TRADE AND INDUS	OTHER VEL
VIRGINIA	328,769	21,159	17,298	5,960	61,552	8,907	43,869	78,328	9,774	80,156	85,767
WASHINGTON	440,760	22,156	34,298	18,675	108,463	19,310	5,883	81,533	13,059	136,908	475
WEST VIRGINIA	132,501	7,060	4,256	9,276	27,337	1,975	0	38,172	8,008	20,944	15,473
WISCONSIN	475,612	22,037	24,744	28,860	100,737	10,984	58,393	118,951	10,383	99,336	1,187
WYOMING	4,772	423	221	50	1,073	15	583	1,169	.	1,149	89
TOTAL U.S.	16453006	878,529	961,018	834,296	3385736	551,862	1536667	3400057	499,305	3215987	1189549

TABLE B-2 ENROLLMENT (VEA), BY PROGRAM STREAM AND BY STATE: 1979-80

STATE	TOTAL	SECONDARY	POSTSECONDARY			
			TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
ALABAMA	233,300	167,208	66,092	12,306	39,996	13,790
ALASKA	11,318	10,210	1,108	1,108	N	N
ARIZONA	227,873	103,752	124,121	79,462	N	44,659
ARKANSAS	140,705	102,771	37,934	506	7,190	30,238
CALIFORNIA	2,143,350	900,679	1,242,671	1,105,721	N	136,950
COLORADO	141,355	64,997	76,358	42,513	28,157	5,688
CONNECTICUT	213,155	196,440	16,715	7,487	N	9,228
DELAWARE	46,797	40,977	5,820	261	N	5,559
D.C.	35,322	34,992	330	N	N	330
FLORIDA	1,185,608	754,904	430,704	204,033	N	226,671
GEORGIA	525,867	415,226	110,641	3,069	5,396	102,176
HAWAII	51,187	35,362	15,825	15,825	N	N
IDAHO	47,062	32,105	14,957	11,246	1,692	2,019
ILLINOIS	761,885	496,734	265,151	236,555	N	28,596
INDIANA	149,033	91,531	57,502	57,502	N	.
IOWA	369,946	71,768	298,178	280,162	N	18,016
KANSAS	103,662	58,015	45,647	9,832	11,032	24,783
KENTUCKY	297,582	185,037	112,545	8,192	81,500	22,853
LOUISIANA	258,006	189,376	68,630	N	31,114	37,516
MAINE	47,175	21,829	25,346	3,165	N	22,181
MARYLAND	268,195	183,538	84,657	61,498	N	23,159
MASSACHUSETTS	363,422	304,734	58,688	24,033	N	34,655
MICHIGAN	324,345	217,587	106,758	106,758	N	N
MINNESOTA	242,658	188,435	54,223	N	54,223	N
MISSISSIPPI	176,890	112,430	64,460	19,085	N	45,375
MISSOURI	255,835	157,270	98,565	28,617	N	69,948
MONTANA	16,350	12,983	3,367	N	N	3,367
NEBRASKA	98,419	53,037	45,382	43,481	N	1,901
NEVADA	36,529	27,105	9,424	9,424	N	.
NEW HAMPSHIRE	41,114	37,149	3,965	2,946	N	1,019
NEW JERSEY	629,255	585,475	43,780	35,633	1,506	6,641
NEW MEXICO	56,082	41,292	14,790	11,552	3,238	N
NEW YORK	1,293,909	953,356	340,553	165,501	4,641	170,411
NORTH CAROLINA	637,971	285,758	352,213	352,213	N	N
NORTH DAKOTA	43,184	27,923	15,261	9,847	N	5,414
OHIO	961,346	663,372	297,974	56,002	13,765	228,207
OKLAHOMA	160,234	71,883	88,351	42,552	40,152	5,647
OREGON	174,674	78,921	95,753	95,753	N	N
PENNSYLVANIA	436,001	273,246	162,755	68,192	18,268	76,295
RHODE ISLAND	85,209	79,020	6,189	3,644	N	2,545
SOUTH CAROLINA	207,021	132,107	74,914	56,727	N	18,187
SOUTH DAKOTA	28,302	21,440	6,862	N	2,613	4,249
TENNESSEE	321,774	193,167	128,607	49,598	14,861	64,148
TEXAS	1,096,186	613,267	482,919	295,463	16,221	171,235
UTAH	104,526	77,198	27,328	19,672	5,348	2,308

TABLE B-2 ENROLLMENT (VEA), BY PROGRAM STREAM AND BY STATE: 1979-80

			POSTSECONDARY			
STATE	TOTAL	SECONDARY	TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
VERMONT	20,973	15,742	5,231	.	5,231	N
VIRGINIA	328,769	235,692	93,077	93,077	N	N
WASHINGTON	440,760	137,705	303,055	188,131	114,924	N
WEST VIRGINIA	132,501	83,240	49,261	13,383	N	35,878
WISCONSIN	475,612	239,657	235,955	235,955	N	N
WYOMING	8,772	8,516	256	256	N	.
TOTAL U.S.	16,453,006	10,082,158	6,370,848	4,167,938	501,068	1,701,842

TABLE B-3 ENROLLMENT IN VOCATIONAL EDUCATION PROGRAMS (VEA), BY PROGRAM AREA AND STREAM 1979-80

PROGRAM AREA	TOTAL	SECONDARY	POSTSECONDARY			
			TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
AGRICULTURE....	878,529	657,247	221,282	89,418	9,401	122,463
DISTRIBUTION...	961,018	396,313	564,705	423,699	17,866	123,230
HEALTH OCCUP...	834,296	128,672	705,624	536,855	34,100	134,669
CONS. & HOMEMAKING	3,385,736	2,622,561	763,175	377,812	36,426	348,937
OCCUP HOME ECON	551,862	361,773	190,089	128,675	20,316	41,098
OFFICE OCCUP...	3,400,057	1,972,161	1,427,896	1,068,262	70,814	288,820
TECHNICAL......	499,305	32,150	467,155	423,063	19,057	25,035
TRADE&IND OCCUP	3,215,987	1,416,230	1,799,757	980,265	279,697	539,795
INDUSTRIAL ARTS	1,536,667	1,517,424	19,243	2,204	0	17,039
OTHER NEC......	1,189,549	977,627	211,922	137,775	13,391	60,756
TOTAL	16,453,006	10,082,158	6,370,848	4,167,938	501,068	1,701,842

TABLE B-4 ENROLLMENT (VEA) BY RACE/ETHNICITY AND NON-RESIDENT ALIEN DESIGNATION AND SEX AND BY INSTRUCTIONAL PROGRAM AREA: 50 STATES AND D.C., 1979-80

INSTRUCTIONAL PROGRAM AREA	TOTAL ENROLL-MENT	RACIAL/ETHNIC DESIGNATION AND SEX												
		AMER. IND/ ALASKAN NATIVE		ASIAN OR PACIFIC ISLANDER		BLACK NOT HISPANIC		HISPANIC		WHITE NOT HISPANIC		NON-RESIDENT ALIEN		STATUS UNKNOWN
		MALE	FEM.	MALE	FEM.	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEM.	
100 AGRICULTURE....	878,529	5,683	1,577	3,610	1,225	56,222	12,158	17,610	5,171	580,621	131,728	254	26	102,632
400 DISTRIBUTION...	961,618	2,835	3,060	8,301	8,712	49,986	61,228	24,296	29,485	329,598	398,800	1,487	2,116	81,510
700 HEALTH OCCUP...	834,296	1,639	5,535	2,061	7,988	14,859	76,970	7,190	25,346	190,154	509,289	688	1,221	62,310
902 OCCUP HOME ECON	551,862	1,050	2,810	1,596	4,089	31,977	97,778	5,842	28,773	78,136	287,498	106	207	16,068
1400 OFFICE OCCUP...	3,403,057	7,863	17,872	25,988	55,769	138,990	378,868	52,978	163,939	696,159	1832195	1,829	2,030	80,190
1600 TECHNICAL......	499,305	8,031	988	10,668	2,888	37,012	18,705	21,812	5,689	298,757	78,299	2,818	309	30,137
1700 TRADE&IND OCCUP	3,215,987	22,198	5,119	42,282	10,238	313,836	87,695	151,998	33,303	1968578	429,920	2,338	437	153,887
9900 OTHER OCC......	1,189,599	2,813	2,536	8,268	8,218	113,311	117,398	27,610	29,872	385,027	379,686	269	249	122,700
901 CONS. & HOMEMKING	3,385,736	5,296	17,906	12,867	38,323	137,807	821,885	88,355	138,707	878,661	1785252	220	317	316,500
1000 INDUSTRIAL ARTS	1,536,667	10,116	1,283	11,288	2,117	191,038	86,511	77,860	16,672	949,172	186,623	0	0	88,031
9999 TOTAL	16853006	63,520	57,886	122481	130651	1088638	1311188	430,115	472,597	5798858	6015098	9,609	6,912	989,501

TABLE B-5 SPECIAL NEEDS ENROLLMENT (VEA), AND PERCENT OF TOTAL ENROLLMENT BY PROGRAM AREA: 50 STATES AND D.C., 1979-80

			SPECIAL NEEDS ENROLLMENT					
			HANDICAPPED		DISADVANTAGED		LEP	
PROGRAM AREA		TOTAL ENROLLMENT	ENROLLMENT	PERCENT OF TOTAL	ENROLLMENT	PERCENT OF TOTAL	ENROLLMENT	PERCENT OF TOTAL
0100	AGRICULTURE....	878,529	23,596	2.7	99,368	11.3	2,689	0.3
0400	DISTRIBUTION...	961,018	12,208	1.3	91,453	9.5	2,978	0.3
0700	HEALTH OCCUP...	834,296	9,468	1.1	85,132	10.2	2,596	0.3
0902	OCCUP HOME ECON	551,862	22,627	4.1	91,221	16.5	2,959	0.5
1400	OFFICE OCCUP...	3,400,057	46,391	1.4	419,790	12.3	17,320	0.5
1600	TECHNICAL......	499,305	5,599	1.1	55,506	11.1	3,248	0.6
1700	TRADE&IND OCCUP	3,215,987	82,738	2.6	396,119	12.3	13,736	0.4
9900	OTHER VOC......	1,189,549	96,312	8.1	287,878	24.2	7,032	0.6
0901	CONS. & HOMEMKING	3,385,736	74,587	2.2	431,587	12.7	17,521	0.5
1000	INDUSTRIAL ARTS	1,536,667	27,162	1.8	80,979	5.3	2,660	0.2
9999	TOTAL	16,453,006	400,575	2.4	2,038,943	12.4	72,731	0.4

TABLE B-6 ENROLLMENT IN COOPERATIVE EDUCATION AND APPRENTICE PROGRAMS, BY PROGRAM AREA AND STREAM: 50 STATES AND D.C., 1979-80

	COOPERATIVE VOCATIONAL EDUCATION ENROLLMENT						APPRENTICE VOCATIONAL EDUCATION ENROLLMENT			
			POSTSECONDARY				POSTSECONDARY			
PROGRAM AREA	TOTAL	SECONDARY	TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER POST-SECONDARY	TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER POST-SECONDARY
AGRICULTURE....	25,332	21,412	3,920	3,367	215	338	196	195	.	1
DISTRIBUTION...	198,380	179,436	18,944	16,464	648	1,832	400	385	.	15
HEALTH OCCUP...	19,996	13,934	6,062	5,067	817	178	431	296	.	135
OCCUP HOME ECON	39,096	35,818	3,278	2,364	233	681	361	352	.	9
OFFICE OCCUP...	120,176	105,620	14,556	13,551	286	719	1,878	1,721	.	157
TECHNICAL......	10,282	2,282	8,000	7,632	308	60	3,048	2,471	162	415
TRADE&IND OCCUP	149,373	134,315	15,058	11,585	697	2,776	132,511	58,944	13,302	60,265
OTHER NEC......	33,028	29,621	3,407	2,983	111	313	3,553	1,573	46	1,934
TOTAL	595,663	522,438	73,225	63,013	3,311	6,901	142,378	65,937	13,510	62,931

TABLE B-7 ENROLLMENTS BY LEGISLATIVE PURPOSE BY STATE: 1979-80

STATE	TOTAL	LEGISLATIVE PURPOSE WORK STUDY	SUPPORT SERVICES FOR WOMEN	DAY CARE SERVICES	VOC. ED. FOR DISPLACED HOMEMAKERS	CONSUM. & HOMEMG. ED. PROGRAMS IN ECONOMICALLY DEPRESSED AREAS
ALABAMA	51,374	700	N	N	14	50,660
ALASKA	128	N	N	N	N	128
ARIZONA	14,656	376	N	100	1,160	13,000
ARKANSAS	39,711	N	N	N	412	39,299
CALIFORNIA	181,081	5,287	10,267	2,248	15,395	147,884
COLORADO	25,672	203	201	N	5,658	19,610
CONNECTICUT	29,700	438	116	.	80	29,106
DELAWARE	1,523	173	152	.	1,198	.
D.C.	35	32	N	N	3	N
FLORIDA	12,966	63	5,184	32	1,204	6,483
GEORGIA	100,849	286	0	0	116	100,447
HAWAII	11,937	315	N	N	326	11,296
IDAHO	10,114	77	N	N	87	9,950
ILLINOIS	11,503	1,734	N	N	214	9,555
INDIANA	28,617	665	.	.	.	27,952
IOWA	30,586	N	N	N	69	30,517
KANSAS	9,083	19	175	60	1,950	6,879
KENTUCKY	31,041	794	248	32	459	29,508
LOUISIANA	29,039	509	.	.	15	28,515
MAINE	575	491	.	4	80	.
MARYLAND	51,633	400	0	0	1,284	49,949
MASSACHUSETTS	526	57	83	.	201	185
MICHIGAN	6,294	1,226	122	259	472	4,215
MINNESOTA	1,861	.	1,500	11	350	0
MISSISSIPPI	2,423	.	.	.	101	2,322
MISSOURI	47,592	319	N	N	1,395	45,878
MONTANA	200	.	.	.	100	100
NEBRASKA	4,163	117	.	.	520	3,526
NEVADA	186	90	.	.	31	65
NEW HAMPSHIRE	4,119	.	2	.	147	3,970
NEW JERSEY	27,095	4,541	.	.	.	22,554
NEW MEXICO	14,545	N	156	N	121	14,268
NEW YORK	105,817	2,150	.	.	1,420	102,247
NORTH CAROLINA	48,184	1,223	205	22	292	46,442
NORTH DAKOTA	4,341	137	0	0	190	4,014
OHIO	105,271	475	N	N	994	103,802
OKLAHOMA	16,397	429	.	.	91	15,877
OREGON	9,874	2	798	N	105	8,969
PENNSYLVANIA	32,006	342	N	N	1,013	30,651
RHODE ISLAND	9,183	60	125	N	60	8,938
SOUTH CAROLINA	42,185	148	.	39	249	41,749
SOUTH DAKOTA	1,806	57	N	N	37	1,712
TENNESSEE	46,765	4,421	364	N	578	41,402
TEXAS	111,262	1,666	5,074	643	396	103,483

TABLE B-7 ENROLLMENTS BY LEGISLATIVE PURPOSE BY STATE: 1979-80

		LEGISLATIVE PURPOSE				
STATE	TOTAL	WORK STUDY	SUPPORT SERVICES FOR WOMEN	DAY CARE SERVICES	VOC. ED. FOR DISPLACED HOMEMAKERS	CONSUM. & HOMEMG. ED. PROGRAMS IN ECONOMIC-CALLY DEPRESSED AREAS
UTAH	11,139	.	.	.	.	11,139
VERMONT	116	116	.	.	.	.
VIRGINIA	21,526	2,126	0	0	0	19,400
WASHINGTON	27,313	183	12,144	312	3,629	11,045
WEST VIRGINIA	870	870	0	0	0	0
WISCONSIN	28,933	1,153	.	.	.	27,780
WYOMING	312	0	0	0	0	312
TOTAL U.S.	1,484,087	38,890	36,916	3,762	82,176	1,286,743

TABLE B-8 PROGRAM COMPLETERS BY INSTITUTIONAL STREAM, BY STATE: 1979-80

STATE	TOTAL	SECONDARY	POSTSECONDARY			
			TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
ALABAMA	31,161	23,583	7,578	1,647	5,931	0
ALASKA	1,624	1,201	423	423	N	N
ARIZONA	15,564	10,760	4,804	1,990	N	2,814
ARKANSAS	13,922	10,902	3,020	178	2,842	0
CALIFORNIA	459,649	161,196	298,453	263,087	N	35,366
COLORADO	14,675	10,050	4,625	1,930	2,695	0
CONNECTICUT	25,438	23,647	1,791	1,226	N	565
DELAWARE	3,177	3,076	101	101	N	0
D.C.	5,037	4,859	178	N	N	178
FLORIDA	85,311	44,832	40,479	13,282	N	27,197
GEORGIA	12,565	5,633	6,932	98	687	6,147
HAWAII	18,523	16,623	1,900	1,900	N	N
IDAHO	2,834	1,580	1,254	1,008	212	34
ILLINOIS	125,307	83,253	42,054	36,760	N	5,294
INDIANA	31,305	0	31,305	31,305	N	.
IOWA	21,675	10,449	11,226	11,226	N	0
KANSAS	18,948	7,212	11,736	1,548	3,090	7,098
KENTUCKY	20,157	16,897	3,260	529	2,651	80
LOUISIANA	32,052	27,727	4,325	N	4,325	0
MAINE	5,989	4,561	1,428	1,428	N	0
MARYLAND	32,109	27,909	4,200	4,200	N	0
MASSACHUSETTS	14,051	8,731	5,320	3,979	N	1,341
MICHIGAN	58,335	47,600	10,735	10,735	N	N
MINNESOTA	63,502	44,851	18,651	N	18,651	N
MISSISSIPPI	16,994	12,443	4,551	4,316	N	235
MISSOURI	43,074	35,103	7,971	6,238	N	1,733
MONTANA	14,673	11,525	3,148	N	N	3,148
NEBRASKA	12,359	9,230	3,129	3,129	N	0
NEVADA	3,197	2,853	344	344	N	.
NEW HAMPSHIRE	5,495	4,171	1,324	907	N	417
NEW JERSEY	31,737	22,992	8,745	7,088	291	1,366
NEW MEXICO	9,102	6,148	2,954	2,724	230	N
NEW YORK	0	0	0	0	0	0
NORTH CAROLINA	37,023	37,023	0	0	N	N
NORTH DAKOTA	6,502	3,736	2,766	2,766	N	0
OHIO	84,488	57,609	26,879	6,394	732	19,753
OKLAHOMA	20,591	12,435	8,156	0	7,892	264
OREGON	16,356	13,908	2,448	2,448	N	N
PENNSYLVANIA	83,291	60,698	22,593	8,650	0	13,943
RHODE ISLAND	9,826	7,799	2,027	2,027	N	0
SOUTH CAROLINA	23,758	17,960	5,798	5,664	N	134
SOUTH DAKOTA	5,708	4,549	1,159	N	1,159	0
TENNESSEE	39,569	28,550	11,019	5,037	5,515	467
TEXAS	146,016	102,002	44,014	41,230	1,849	935
UTAH	18,631	13,196	5,435	3,371	2,062	2

TABLE B-8 PROGRAM COMPLETERS BY INSTITUTIONAL STREAM, BY STATE: 1979-80

STATE	TOTAL	SECONDARY	POSTSECONDARY			
			TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
VERMONT	2,980	2,830	150	.	150	N
VIRGINIA	32,369	26,873	5,496	5,496	N	N
WASHINGTON	39,059	26,310	12,749	8,376	4,373	-
WEST VIRGINIA	14,331	11,168	3,163	1,085	N	2,078
WISCONSIN	26,984	14,310	12,674	12,674	N	N
WYOMING	911	724	187	187	N	.
TOTAL U.S.	1,857,934	1,143,277	714,657	518,731	65,337	130,589

TABLE B-9   PROGRAM COMPLETERS BY INSTITUTIONAL STREAM BY INSTRUCTIONAL PROGRAM: 1979-80

PROGRAM	TOTAL	SECONDARY	POSTSECONDARY			
			TOTAL	REGIONALLY ACCREDITED	STATE APPROVED	OTHER
AG. PRODUCTION.	64,483	58,377	6,106	3,742	388	1,976
AG. SUP./SERVCE	8,196	6,642	1,554	1,197	195	162
AG. MECHANICS..	25,716	24,416	1,300	822	310	168
AG. PRODUCTS...	2,006	1,792	214	155	43	16
HORTICULTURE...	22,601	16,758	5,843	4,298	457	1,088
RENEW.NAT.RESRC	4,263	3,072	1,191	1,036	72	83
FORESTRY.......	3,551	2,849	702	572	60	70
OTHER AG.	9,667	8,433	1,234	996	35	203
ADVERTIS.SERVCE	3,681	2,138	1,543	1,376	90	77
APPAREL&ACCESS.	9,680	8,248	1,432	1,212	173	47
AUTOMOTIVE.....	2,746	2,482	264	117	48	99
FINANCE CREDIT.	6,448	1,797	4,651	3,582	121	948
FLORISTRY......	2,251	1,057	1,194	281	125	788
FOOD DISTRIBUTN	12,594	10,257	2,337	752	616	969
FOOD SERVICES..	16,227	14,239	1,988	1,602	117	269
GEN.MERCHANDISE	72,446	63,440	9,006	6,145	699	2,162
HARDWRE.BLD.MAT	1,676	1,606	70	38	32	0
HOME FURNISHING	950	704	246	129	91	26
HOTEL & LODGING	2,764	968	1,796	1,229	21	546
INDUSTRIAL MARK	4,812	1,046	3,766	3,691	68	7
INSURANCE......	1,768	300	1,468	1,379	29	60
PERSONAL SERVCE	2,230	2,176	54	52	.	2
REAL ESTATE....	39,578	282	39,296	27,961	476	10,859
RECREATION&TRSM	4,482	1,343	3,139	2,926	143	70
TRANSPORTATION	4,713	1,154	3,559	2,325	94	1,140
OTHER RETAIL TD	6,209	4,030	2,179	786	18	1,375
OTHER DISTRB.ED	33,721	28,432	5,289	4,743	36	510
DENT. ASSISTING	6,986	2,515	4,471	2,607	742	1,122
DENT. HYGIENE A	2,085	16	2,069	2,051	18	0
DENT. LAB. TECH	1,505	508	997	637	161	199
MED. LAB. ASST.	2,479	704	1,775	1,321	223	231
OTHR.MED.LAB.TE	1,187	236	951	840	15	96
NURSING ASS.DEG	24,523	105	24,418	24,145	229	44
PRACT(VOC)NURSE	29,660	1,679	27,981	12,358	5,940	9,683
NURSING ASSIST.	24,850	12,245	12,605	6,022	1,864	4,719
OTHER NURSING..	6,512	1,545	4,967	3,616	858	493
REHABILITATION.	1,695	245	1,450	1,051	88	311
RD.TCH (XRAY)	2,653	63	2,590	2,482	28	80
MENTAL HEALTH..	1,835	104	1,731	1,383	141	207
INHALAT. THERAP	2,948	41	2,907	2,539	143	225
MEDICAL ASSIST.	5,816	1,404	4,412	3,139	360	913
COMMUN. HEALTH.	3,605	3,112	493	271	15	207
MED.EMERG.TECH.	6,706	228	6,478	4,928	390	1,160
OTHER HEALTH ED	22,836	14,110	8,726	7,022	480	1,224

TABLE B-9 PROGRAM COMPLETERS BY INSTITUTIONAL STREAM BY INSTRUCTIONAL PROGRAM: 1979-80

PROGRAM	TOTAL	SECONDARY	POSTSECONDARY TOTAL	POSTSECONDARY REGIONALLY ACCREDITED	POSTSECONDARY STATE APPROVED	POSTSECONDARY OTHER
CARE&GUIDANCE	30,478	20,367	10,111	8,714	505	892
CLOTH,MGT,PROD.	9,853	8,473	1,380	833	207	340
FOOD MGT,PROD.	30,550	26,049	4,501	2,379	1,031	1,091
HOME FURN,EQUIP	2,249	967	1,282	1,106	61	115
INST,&HOME MGT.	2,330	1,528	802	607	86	109
OTHR,OCCP,PREP.	15,475	12,470	3,005	1,238	786	981
ACCT&COMPUT OCC	107,409	68,879	38,530	32,317	2,471	3,742
COMP&CONSOLE OP	12,209	4,941	7,268	4,771	1,050	1,447
PROGRAMMERS....	15,402	4,036	11,366	10,473	384	509
OTHER BUS. DP..	18,917	9,817	9,100	7,682	560	858
FILING&GEN. OFF	122,758	98,936	23,822	17,395	2,303	4,124
INFO.COMM.OCCUP	13,016	8,947	4,069	3,649	79	341
MATERIAL SUPORT	1,016	795	221	170	43	8
PERSONNEL TRAIN	4,341	1,279	3,062	2,939	2	121
STENO.SECRETARY	125,731	83,510	42,221	33,138	2,992	6,091
SUPERVIS/ADMIN.	24,771	2,683	22,088	20,343	1,444	301
TYPING& RELATED	85,169	69,825	15,344	9,941	1,389	4,014
OTHER OFF.OCCUP	32,573	25,389	7,184	6,219	138	827
ARCHITECT.TECH.	5,185	338	4,847	4,582	195	70
AUTOMOTIVE TECH	3,570	198	3,372	3,325	2	45
CIVIL TECH. ...	2,661	192	2,469	1,943	335	191
ELECTRICAL TECH	2,120	488	1,632	1,417	86	129
ELECTRONIC TECH	17,447	1,874	15,573	13,742	1,291	540
ENVIRON.CONTROL	1,170	137	1,033	941	82	10
INDUST. TECH...	2,237	36	2,201	2,035	166	0
MECHANICAL TECH	4,590	55	4,535	4,195	241	99
SCIENTIFIC DP..	3,437	1,219	2,218	2,075	27	116
COMMERCIAL PILT	1,856	8	1,848	1,720	39	89
FIRE&SAFETY TEC	4,520	9	4,511	4,508	3	0
POLICE SCIENCE.	15,707	330	15,377	15,301	15	61
OTHER TECH. ED.	17,390	1,276	16,114	15,109	193	812
WATER&WASTE TEC	683	11	672	603	24	45
AIR CONDITION..	12,508	5,457	7,051	3,662	1,218	2,171
APPLIANCE REPAR	3,167	1,856	1,311	639	281	391
BODY&FENDER RPR	20,152	13,757	6,395	3,117	1,162	2,116
AUTO.MECHANICS.	80,266	61,402	18,864	10,831	2,923	5,110
AUTO.SPECIALIZA	8,560	7,016	1,544	174	110	1,260
AVIATION OCCUP.	5,791	1,505	4,286	2,182	1,621	483
COMMERCIAL ART.	10,262	5,133	5,129	4,312	306	511
COMMERCIAL PHOT	6,612	2,307	4,305	3,480	194	631
CARPENTRY	34,325	25,953	8,372	5,070	1,162	2,140
ELECTRICITY ...	8,755	5,755	3,000	1,461	623	916
MASONARY	8,984	6,849	2,135	576	499	1,060
PLUMBING&PIPEFT	4,978	1,819	3,159	1,167	387	1,605

TABLE B-9 PROGRAM COMPLETERS BY INSTITUTIONAL STREAM BY INSTRUCTIONAL PROGRAM: 1979-80

PROGRAM	TOTAL	SECONDARY	POSTSECONDARY TOTAL	POSTSECONDARY REGIONALLY ACCREDITED	POSTSECONDARY STATE APPROVED	POSTSECONDARY OTHER
OTHER CONSTR...	24,744	18,872	5,872	2,917	717	2,238
CUSTODIA.SERVCE	3,029	2,420	609	81	229	299
DIESEL MECHANIC	6,927	2,584	4,343	2,088	1,334	921
DRAFTING OCCUP.	30,370	21,053	9,317	6,064	1,885	1,368
ELECTRICAL OCCP	9,519	5,337	4,182	1,906	796	1,480
ELECTRONIC OCCP	28,096	16,910	11,186	6,700	1,331	3,155
FOREMANSHP&MGT.	6,078	248	5,830	5,700	11	119
GRAPHIC ART OCC	23,592	17,907	5,685	3,717	840	1,128
INSTRUMT.MAINT.	778	179	599	364	188	47
MARITIME OCCUP.	1,132	411	721	571	29	121
MACHINE SHOP ..	21,570	13,654	7,916	3,854	1,726	2,336
MACHINE TOOL OP	2,610	1,140	1,470	961	115	394
SHEET METAL....	3,454	2,155	1,299	658	203	438
WELDING&CUTTING	37,279	17,531	19,748	10,995	3,782	4,971
TOOL&DIE MAKING	1,067	222	845	290	373	182
OTHER METALWORK	12,514	10,229	2,285	1,793	118	374
METLLURGY OCCUP	240	94	146	134	11	1
COSMETOLOGY....	25,427	18,377	7,050	1,761	1,192	4,097
OTHER PERSONAL.	3,601	456	3,145	3,060	50	35
PLASTIC OCCUP..	1,057	816	241	199	39	3
FIREMAN TRAING.	13,800	418	13,382	9,932	22	3,428
LAW ENFORE.TRAI	15,588	1,558	14,030	12,694	175	1,161
OTHER PUB.SERVC	4,899	1,552	3,347	2,819	13	515
QUANTITY FOOD..	11,092	7,524	3,568	2,375	267	926
REFRIGERATION..	1,155	437	718	411	122	185
SMALL ENG.REPAR	7,490	4,971	2,519	582	633	1,304
STATION.ENERGY.	740	258	482	276	10	196
TEXTILE PROD...	5,845	3,592	2,253	1,256	173	824
UPHOLSTERING...	2,560	1,252	1,308	298	231	779
WOODWORKING....	9,821	7,812	2,009	1,078	227	704
OTHER TRADE&IND	42,518	30,985	11,533	7,749	1,425	2,359
OTHER MORE 1%	25,301	19,288	6,013	3,769	1,480	764
OTHER LESS 1%	15,521	12,266	3,255	42	622	2,591
TOTAL	1,857,934	1,143,277	714,657	518,731	65,337	130,589

TABLE E-10 SPECIAL NEEDS COMPLETERS AND PERCENT OF TOTAL COMPLETERS BY PROGRAM AREA: 1979-80

		SPECIAL NEEDS COMPLETERS					
		HANDICAPPED		DISADVANTAGED		LEP	
PROGRAM AREA	TOTAL COMPLETERS	COMPLETERS	PERCENT OF TOTAL	COMPLETERS	PERCENT OF TOTAL	COMPLETERS	PERCENT OF TOTAL
01 AGRICULTURE....	140,483	3,374	2.4	16,283	11.6	509	0.4
04 DISTRIBUTION...	228,976	2,949	1.3	20,381	8.9	604	0.3
07 HEALTH OCCUP...	147,881	1,975	1.3	20,377	13.8	440	0.3
09 OCCUP HOME ECON	90,935	3,546	3.9	13,987	15.4	320	0.4
14 OFFICE OCCUP...	563,312	13,331	2.4	76,680	13.6	3,010	0.5
16 TECHNICAL......	82,573	1,104	1.3	8,090	9.8	409	0.5
17 TRADE&IND OCCUP	562,952	16,077	2.9	73,811	13.1	2,749	0.5
99 OTHER NEC......	40,822	2,649	6.5	4,460	10.9	120	0.3
00 TOTAL	1,857,934	45,005	2.4	234,073	12.6	8,161	0.4

TABLE B-11 PROGRAM COMPLETERS BY RACIAL/ETHNIC AND NON-RESIDENT ALIEN DESIGNATION AND SEX BY INSTRUCTIONAL PROGRAM: 1979-80

PROGRAM	TOTAL	AMERICAN INDIAN /ALASKAN NATIVE		ASIAN OR PACIFIC ISLANDER		BLACK NOT HISPANIC		HISPANIC		WHITE NOT HISPANIC		NON-RESIDENT ALIEN		STATUS UNKNOWN
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
AG. PRODUCTION.	64,483	395	93	419	92	2764	429	1691	432	42047	8768	21	1	7,331
AG. SUP./SERVCE	8,196	21	7	18	14	230	42	119	42	5746	1444	13	0	500
AG. MECHANICS..	25,716	212	28	61	2	2229	85	822	45	17683	974	4	0	3,571
AG. PRODUCTS...	2,006	42	14	6	5	117	28	42	15	1195	469	1	2	70
HORTICULTURE...	22,601	90	48	570	217	1037	490	612	319	9294	7553	1	0	2,370
RENEW.NAT.RESRC	4,263	33	7	15	36	96	19	92	41	2692	906	0	0	326
FORESTRY.......	3,551	21	10	10	4	183	17	43	16	2327	431	0	0	489
OTHER AG.	9,667	115	20	82	23	170	70	247	71	6761	1594	9	1	504
ADVERTIS.SERVCE	3,681	3	5	53	59	221	238	45	50	1044	1372	3	3	585
APPAREL&ACCESS.	9,680	2	16	13	92	303	1086	65	272	910	5143	0	2	1,776
AUTOMOTIVE.....	2,746	11	0	3	2	195	48	55	6	1838	243	1	0	344
FINANCE CREDIT.	6,448	55	31	81	136	145	350	134	292	1303	3072	6	8	835
FLORISTRY......	2,251	0	6	2	21	17	57	22	79	290	1444	0	0	313
FOOD DISTRIBUTN	12,594	15	42	39	105	713	740	209	345	4456	4167	0	0	1,763
FOOD SERVICES..	16,227	14	50	91	190	1206	1431	199	391	4076	6074	2	3	2,500
GEN.MERCHANDISE	72,446	194	257	664	1,151	3166	5307	1208	2,321	21760	31961	6	3	4,448
HARDWRE,BLD,MAT	1,676	2	1	6	0	88	39	44	12	904	283	0	0	297
HOME FURNISHING	950	3	0	3	7	32	33	7	26	301	412	0	0	126
HOTEL & LODGING	2,764	2	5	49	62	164	201	78	111	856	849	14	9	364
INDUSTRIAL MARK	4,812	17	6	42	19	534	185	219	93	2140	1094	8	4	451
INSURANCE......	1,768	8	3	19	15	35	39	48	47	683	608	0	0	263
PERSONAL SERVCE	2,230	2	9	1	0	80	165	26	36	468	940	0	0	503
REAL ESTATE....	39,578	125	117	789	588	1382	1423	1101	850	14969	15533	12	12	2,677
RECREATION&TRSM	4,482	6	23	36	83	221	192	78	167	978	2011	3	3	681
TRANSPORTATION	4,713	14	5	55	53	227	188	134	205	1469	1825	7	3	528
OTHER RETAIL TD	6,209	7	13	23	16	168	226	71	68	2247	2520	4	2	844
OTHER DISTRB.ED	33,721	53	56	98	93	1770	2184	1738	1,816	11058	12783	3	1	2,068
DENT. ASSISTING	6,986	4	32	24	94	34	416	35	504	165	5144	0	6	528
DENT. HYGIENE A	2,085	0	4	0	14	0	11	1	28	144	1517	0	3	363
DENT. LAB. TECH	1,505	4	6	33	18	86	131	50	101	447	525	5	0	99
MED. LAB. ASST.	2,479	0	10	13	30	77	288	20	86	210	1358	1	3	383
OTHR.MED.LAB.TE	1,187	0	2	7	17	21	70	23	33	125	838	2	5	44
NURSING ASS.DEG	24,523	12	117	59	457	159	1445	91	650	1380	17692	21	28	2,412
PRACT(VOC)NURSE	29,660	37	219	27	198	195	2855	87	777	870	22333	0	14	2,048
NURSING ASSIST.	24,850	34	343	43	420	232	3607	150	1,561	1004	16847	0	3	606
OTHER NURSING..	6,512	7	49	40	167	63	647	73	331	589	4121	0	5	420
REHABILITATION.	1,695	4	4	1	17	31	123	24	89	156	1130	0	1	115
RD.TCH (XRAY)	2,653	2	17	34	38	67	125	104	88	467	1432	3	5	271
MENTAL HEALTH..	1,835	3	11	4	13	94	262	32	72	279	974	0	1	90
INHALAT. THERAP	2,948	9	17	26	28	77	146	64	89	656	1441	1	1	393
MEDICAL ASSIST.	5,816	2	52	16	169	29	482	34	356	184	4288	0	1	203
COMMUN. HEALTH.	3,605	0	9	0	6	21	214	6	38	158	1785	0	0	1,368
MED.EMERG.TECH.	6,706	92	40	45	25	218	124	237	102	3461	1831	2	5	524

TABLE B-11 PROGRAM COMPLETERS BY RACIAL/ETHNIC AND NON-RESIDENT ALIEN DESIGNATION AND SEX BY INSTRUCTIONAL PROGRAMS 1979-80

PROGRAM	TOTAL	AMERICAN INDIAN /ALASKAN NATIVE		ASIAN OR PACIFIC ISLANDER		BLACK NOT HISPANIC		HISPANIC		WHITE NOT HISPANIC		NON-RESIDENT ALIEN		STATUS UNKNOWN
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
OTHER HEALTH ED	22,836	100	239	76	211	524	2566	434	1,144	2986	13643	8	5	900
CARE&GUIDANCE	30,478	62	162	33	406	372	5059	198	2,250	944	18737	1	20	2,238
CLOTH.MGT.PROD.	9,853	5	27	9	118	807	3263	59	353	252	4170	0	0	790
FOOD MGT.PROD.	30,559	56	94	482	479	2720	5244	414	635	5971	11542	0	0	2,913
HOME FURN.EQUIP	2,249	3	3	6	18	36	152	36	83	255	1316	0	0	341
INST.&HOME MGT.	2,330	3	15	13	19	90	290	17	60	284	1485	0	0	54
OTHR.OCCP.PREP.	15,475	17	99	17	37	712	2264	593	1,509	1806	7922	1	0	498
ACCT&COMPUT OCC	107,409	297	457	2,049	4,005	4022	8254	2019	4,666	23689	52547	29	34	5,341
COMP&CONSOLE OP	12,209	18	68	313	605	418	976	268	644	2622	4541	49	18	1,669
PROGRAMMERS....	15,402	35	43	351	328	933	1314	520	417	4869	5044	44	22	1,482
OTHER BUS. OP..	18,917	112	84	553	819	1007	2307	342	730	4487	7641	26	24	785
FILING&GEN. OFF	122,758	270	900	1,059	4,049	3141	13814	1740	8,266	12703	67204	5	32	9,575
INFO.COMM.OCCUP	13,016	44	122	125	232	541	1049	228	486	2524	6738	0	5	922
MATERIAL SUPORT	1,016	2	1	4	4	47	25	27	22	462	404	0	0	18
PERSONNEL TRAIN	4,341	9	19	70	74	192	433	187	357	824	1897	3	1	275
STENO.SECRETARY	125,731	97	654	207	2,699	845	13469	605	7,189	5124	88472	4	78	6,288
SUPERVIS/ADMIN.	24,771	79	68	249	216	1126	979	814	689	9037	8904	55	34	2,521
TYPING& RELATED	85,169	121	540	673	2,578	2341	11028	1173	6,169	9431	46158	4	47	4,906
OTHER OFF.OCCUP	32,573	38	79	104	196	380	2790	415	4,663	3678	17808	22	14	2,386
ARCHITECT.TECH.	5,185	25	7	309	99	383	108	357	73	2762	748	20	5	289
AUTOMOTIVE TECH	3,570	48	4	52	3	364	27	89	2	2683	139	0	0	159
CIVIL TECH. ...	2,661	19	3	51	2	103	11	137	11	1726	229	29	1	339
ELECTRICAL TECH	2,120	9	1	70	3	67	5	40	3	1466	79	4	0	373
ELECTRONIC TECH	17,497	117	14	1,132	182	1105	170	694	79	11655	1155	88	2	1,054
ENVIRON.CONTROL	1,170	6	10	19	15	28	4	52	15	772	187	1	0	61
INDUST. TECH...	2,237	14	3	21	2	236	30	37	8	1478	125	6	0	277
MECHANICAL TECH	4,590	28	7	63	10	294	86	85	15	3089	399	14	1	499
SCIENTIFIC DP..	3,437	11	6	99	55	97	94	58	43	976	1030	6	1	961
COMMERCIAL PILT	1,856	60	3	28	19	46	13	62	8	1041	218	0	0	358
FIRE&SAFETY TEC	4,520	111	9	48	10	165	5	208	37	3327	159	3	1	437
POLICE SCIENCE.	15,707	119	41	233	122	1299	644	968	423	7141	2449	16	3	2,249
OTHER TECH. ED.	17,390	79	30	189	66	816	589	617	369	8892	3951	45	16	1,731
WATER&WASTE TEC	683	5	1	9	1	38	2	60	2	494	37	1	0	33
AIR CONDITION..	12,508	76	8	163	10	1278	50	845	50	8791	339	15	0	883
APPLIANCE REPAR	3,167	19	0	49	1	479	31	193	15	1938	102	1	0	339
BODY&FENDER RPR	20,152	255	11	219	14	2242	35	1870	47	13611	276	5	2	1,565
AUTO.MECHANICS.	80,266	798	64	2,398	105	7407	265	5284	265	54978	2367	33	1	6,301
AUTO.SPECIALIZA	8,560	67	4	200	11	440	47	1019	50	4982	316	3	0	1,421
AVIATION OCCUP.	5,791	66	14	196	31	400	101	427	44	3677	442	19	1	373
COMMERCIAL ART.	10,262	67	32	111	118	609	351	379	369	3081	4308	2	6	829
COMMERCIAL PHOT	6,612	33	15	145	116	304	152	461	300	2647	1904	1	1	533
CARPENTRY	34,325	437	27	226	17	2898	152	1199	47	23811	774	5	0	4,732
ELECTRICITY ...	8,755	55	4	102	1	899	47	274	18	6008	125	1	0	1,221

TABLE E-11 PROGRAM COMPLETERS BY RACIAL/ETHNIC AND NON-RESIDENT ALIEN DESIGNATION AND SEX BY INSTRUCTIONAL PROGRAM: 1979-80

PROGRAM	TOTAL	AMERICAN INDIAN /ALASKAN NATIVE		ASIAN OR PACIFIC ISLANDER		BLACK NOT HISPANIC		HISPANIC		WHITE NOT HISPANIC		NON-RESIDENT ALIEN		STATUS UNKNOWN
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
MASONARY	8,984	57	0	18	1	2762	64	357	6	4124	64	1	0	1,530
PLUMBING&PIPEFT	4,978	69	8	80	3	656	22	427	15	3484	70	1	0	143
OTHER CONSTR...	24,744	246	23	655	41	2674	196	1604	100	17637	892	24	0	652
CUSTODIA.SERVCE	3,029	33	3	20	3	704	118	171	18	1591	250	0	0	118
DIESEL MECHANIC	6,927	67	2	89	1	396	16	350	16	5507	99	10	0	374
DRAFTING OCCUP.	30,370	203	41	719	168	2403	427	1518	266	16979	3887	53	4	3,702
ELECTRICAL OCCP	9,519	62	8	124	5	1045	46	513	16	6978	187	6	0	529
ELECTRONIC OCCP	28,096	275	40	996	288	3068	798	1936	448	16483	1868	31	5	1,860
FOREMANSHP&MGT.	6,078	37	37	117	107	417	440	312	223	2110	1679	3	0	596
GRAPHIC ART OCC	23,592	136	58	375	141	2183	855	1203	528	10362	6026	2	2	1,721
INSTRUMT.MAINT.	778	1	0	2	1	70	12	18	1	450	83	0	0	140
MARITIME OCCUP.	1,132	13	1	18	1	73	7	73	4	651	66	0	0	225
MACHINE SHOP ..	21,570	121	18	681	35	1807	157	1187	58	15687	645	12	0	1,162
MACHINE TOOL OP	2,619	5	0	77	3	171	44	70	13	1867	186	3	0	171
SHEET METAL....	3,454	46	4	81	3	449	41	337	9	2275	81	0	0	128
WELDING&CUTTING	37,279	463	38	537	43	3764	394	2374	99	25384	1054	11	0	3,118
TOOL&DIE MAKING	1,067	8	1	19	0	78	1	32	50	840	16	1	0	21
OTHER METALWORK	12,514	78	8	208	25	678	38	541	24	10336	437	3	0	138
METLLURGY OCCUP	240	2	2	13	2	30	3	18	0	143	22	1	0	4
COSMETOLOGY....	25,427	111	92	41	276	212	2986	267	2,162	965	17892	0	3	420
OTHER PERSONAL.	3,601	27	50	16	77	123	339	89	383	349	1749	1	2	396
PLASTIC OCCUP..	1,057	9	1	27	5	123	24	113	10	619	100	0	0	26
FIREMAN TRAING.	13,800	127	12	82	4	249	7	414	15	12268	421	0	0	201
LAW ENFORE.TRAI	15,588	181	48	118	21	640	279	931	300	9664	2880	11	6	509
OTHER PUB.SERVC	4,899	17	48	68	86	443	518	230	245	1128	1625	0	5	486
QUANTITY FOOD..	11,092	103	41	144	112	1103	1045	369	267	3738	3347	1	1	821
REFRIGERATION..	1,155	5	2	36	3	106	5	47	3	798	47	1	0	102
SMALL ENG.REPAR	7,490	41	5	44	2	897	35	359	6	5380	175	1	0	545
STATION.ENERGY.	740	2	0	15	1	66	11	78	2	444	45	0	0	76
TEXTILE PROD...	5,845	9	34	27	258	503	1663	69	404	331	1291	1	4	1,251
UPHOLSTERING...	2,560	38	7	56	24	433	222	320	106	746	541	22	0	45
WOODWORKING....	9,821	74	5	92	5	912	85	779	58	6377	474	0	0	960
OTHER TRADE&IND	42,518	297	78	302	135	3001	1289	2912	843	22975	6078	15	6	4,587
OTHER MORE 1X	25,301	71	61	89	44	1945	1824	190	187	10231	7978	1	1	2,679
OTHER LESS 1X	15,521	5	6	27	53	920	2707	587	2,076	2662	6458	0	0	0
TOTAL	1,857,934	8,599	6,578	22,158	24,879	96244	121271	56479	64,719	654287	654469	946	552	146,753